



RETHINK CRITICAL REGIONALISM

Hot spring hotel design

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Abstract

In the age of globalization, China has been keen on creating internationalized images for the country. China has become a test field for different architecture styles, mostly western styles. The cultural identity of China has been sacrificed for the rapid expansion of the modernized city in a Pan-western manner. Hence, the topic is hotly debated between regionalism and internationalism in architectural design. How can architectural design succeed in balancing different influences of western modernism and traditional Chinese culture?

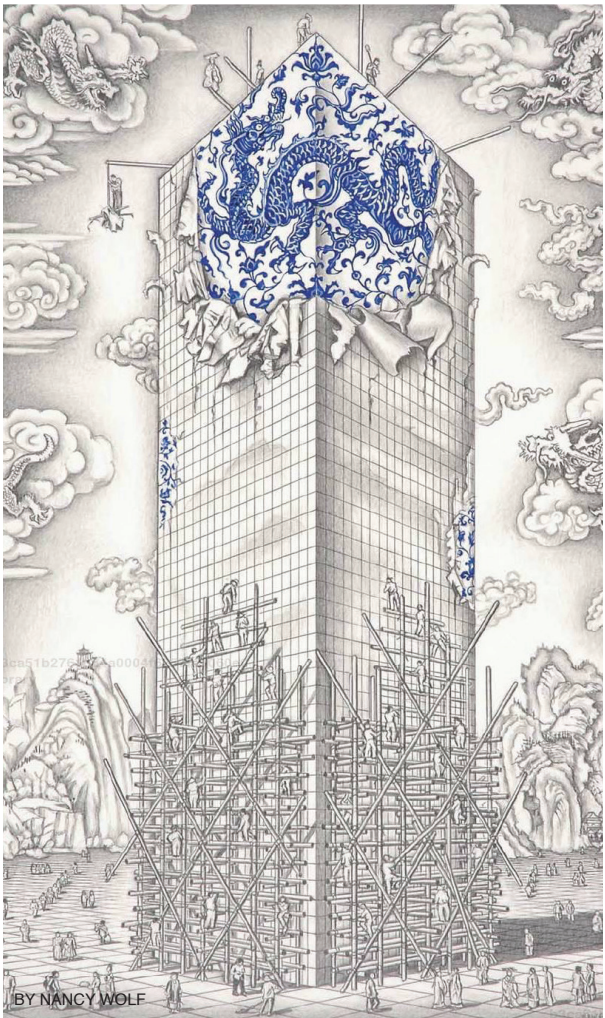
Thus, critical regionalism, as a specific architectural method, provides a unique approach in adapting western modernism to a Chinese cultural-specific local context and content. The study of critical regionalism has been rich in shaping the theoretical background and helping the author to establish her theoretical frame in this thesis. At first, the thesis researches and rethinks about critical regionalism, discovering certain practical references. On the next, the thesis intends to develop a practical design strategy for the design project. Based on the site and regional culture, the thesis attempts to explore a new design language, which is not only local but also satisfies modern needs. During the process of researching critical regionalism and local culture, the thesis extracts meaningful design elements from vernacular architecture and attempts to implement them into the project design in question. The objective of this research is to design a hot spring hotel, trying to combine the natural and regional feature without missing its attributes in satisfying potential customers' physical and emotional needs, in a specific Chinese region, namely Ningxiang County, Hunan Province.

Keywords critical regionalism, hotel design, vernacular architecture

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A bstract



In the age of globalization, China has been keen on creating internationalized images for the country. China has become a test field for different architecture styles, mostly western styles. The cultural identity of China has been sacrificed for the rapid expansion of the modernized city in a Pan-western manner. Hence, the topic is hotly debated between regionalism and internationalism in architectural design. How can architectural design succeed in balancing different influences of western modernism and traditional Chinese culture?

Thus, critical regionalism, as a specific architectural method, provides a unique approach in adapting western modernism to a Chinese cultural-specific local context and content. The study of critical regionalism has been rich in shaping the theoretical background and helping the author to establish her theoretical frame in this thesis. At first, the thesis researches and rethinks about critical regionalism, discovering certain practical references. On the next, the thesis intends to develop a practical design strategy for the design project. Based on the site and regional culture, the thesis attempts to explore a new design language, which is not only local but also satisfies modern needs. During the process of researching critical regionalism and local culture, the thesis extracts meaningful design elements from vernacular architecture and attempts to implement them into the project design in question. The objective of this research is to design a hot spring hotel, trying to combine the natural and regional features without missing its attributes in satisfying potential customers' physical and emotional needs, in a specific Chinese region, namely Ningxiang County, Hunan Province.

I II III IV V

Introduction

INTRODUCTION



Fig. 1



Fig. 2

Fig. 1, China Central Television Headquarters

Fig. 2, National Centre for the Performing Arts

“There is the paradox: How to become modern and to return to sources; how to revive an old dormant civilization and take part in universal civilization.” — — — Paul Ricoeur, *History of Truth* (1961, 267)

With rapid economic development, the number of modernized cities has grown quickly in China. Metropolis, like Beijing and Shanghai, have had more and more skyscrapers and highways in the past three decades. The smaller cities, also intend to expand themselves as modern cities, following the path of Beijing and Shanghai. High level of modernization and internationalization have benefited China in a large extent. They have brought powerful, stable and prosperous cities to China. These modern cities have improved people's life quality to a large extent.

However, the problems posed by the rapid development of modern architecture would be worthwhile to think over. When people intend to over-pursue the high level of efficiency and quantity, architecture would be merely reduced to mass-produced commodities without local features respectively in certain aspects such as culture, aesthetics, environment and customary habits. When people start to pay attention to characteristics and differentiation in architectures, China becomes a large testing ground for different architec-

tural styles, mostly western styles. For instance, the National Centre for the Performing Arts in Beijing (Fig. 2), an opera house with a titanium accented glass dome, was designed by French architect Paul Andreu. Local people jokingly called it “the Giant Egg”, and the China Central Television Headquarters in Beijing (Fig. 1) designed by a Netherlands-based studio “architects OMA”, was mocked by local people as “The Big Pants”, because of its radical shape.

The President of the People's Republic of China, Xi Jinping, intends to call for an end to the “weird buildings” being built in China, and particularly in the nation's capital, Beijing. Recently in 2015, Mr. Xi has had a two-hour-speech at a literary symposium in Beijing, expressing his views that art should serve the people and be morally inspiring, identifying architectural projects such as OMA's CCTV Headquarters as “the kind of building that should no longer be constructed in Beijing.” (Rory 2014)

Numbers of architects now are considering China as a huge construction site where their unusual innovations of architectural design could possibly be achieved. Whereas, local people are facing the identity crisis when inevitably encountering the gradual altering face of the used-to-be regional environment because of those unusual western style

architecture.

Chinese people have started already noticing the problem. They also have started trying to seek back for local culture and local aesthetics and further partially resisting the overwhelming so-called “mainstream of universal civilization” whose essence may be identified as the dominant core of the mighty western civilization, especially from Anglo-Saxon society, in order to fill the blank of cultural sense of belonging or, in other words, the scarcity of cultural identity that is produced by the over pursuit of the “modernization” or “internationalization”.

The question is, now as more and more regional cultures assimilated by the western-defined “universal civilization”, where that regional architecture design will go.

Thus, critical regionalism, as a design method, or a relatively newly defined way of design thinking has come to its place in offering the answer to how to resist “universal civilization” in Chinese social and cultural context. In the discussion of critical regionalism, researchers suggest it is favorable that the regional architecture should be interpreted in a “modern” way from the perspective of technology, aesthetics and current lifestyles; a highly modernized architecture should not be separated from regional environment and culture and instead, it needs to be in harmony with local needs, culture and environment. In particular, Wang Shu, a Chinese local architect based in Hangzhou, Zhejiang Province, has designed the Ningbo museum. In this design, he

succeeds in balancing the gap between the western modernized style and traditional Chinese aesthetics. The bricks and tiles used in the facade of building were recycled from the old vernacular dwelling houses demolished for urban modernization. The design is considered by theorists as an artefact that responds to the regional culture and environment appropriately. (Basulto, 2012)

The initial idea of this thesis is to explore how to blend vernacular architectural characteristics in a modern spatial design. Critical regionalism provides a feasible theoretical basis for the research part of this thesis. In the research chapter, the thesis studies the critical regionalism as a subject directly affecting the practical design strategy, mainly focusing on Kenneth Frampton's view in critical regionalism. It follows rethinking and reconstruction about the theory of critical regionalism to frame a practical design strategy. In design chapter, the design process starts from studying and discovering in what sense the Chinese local village located in Ningxiang County matters to this project in question. The current value of the local village which adapts to the local environment have withstood the test of time. It is promising to learn from the past experience with local wisdom, but addiction towards it is rather not recommended. It is important to keep an open mind and a critical attitude to extract the valuable part of the design of those old vernacular dwelling houses and abandon the outdated part. Then, the valuable part of local elements will be brought into a modern spatial design, namely a hot spring hotel.

The site is located in Ningxiang County, Hunan Province, a small town with rich hot spring resource in hilly terrain in central China. Comparing to metropolis, like Beijing and Shanghai, the modernization in Ningxiang is proceeding relatively slower and in a unsystematic manner. The town still retains a high level of indigenous characteristics. However in the recent 10 years, the small town has been developed as hot spring resort because of its affluence of hot spring resource. Western-oriented modernization and internationalization start eroding this small town. The theoretical research and hot spring hotel design in this thesis attempt to rethink the modern architecture and regional architecture in a critical way and find the coherence and balance point between them.

I II III IV V

Theoretical Background

Critical Regionalism

During the modernization in the twentieth century, people are subject to the tendency of pursuing a high level of rationalization, standardization, and efficiency. The mechanized civilization dominated the architectural design in the twentieth century. However, after the development of the passed century, most of the developed countries already passed through the peak period of massive urban construction and have been looking anew at architecture. It is believed that not only should the architecture satisfy people's material needs, but also explore human values. Nevertheless, China, as the largest developing country, is experiencing the peak period of urban construction and sacrificing autochthonous culture for rapid development. However, when facing the overwhelming impact of the domination of the "universal civilization", some of people have started to introspect the gradual loss of local cultural identity resulted from this, trying to find a way to integrate local culture and "universal civilization". Critical regionalism introduces a new architecture design method in a critical way. It suggests that architecture need to return to the regional environment and culture to seek closer ties between them. Furthermore, designers need to be critical about modernization and internationalization. (Frampton 1983, 16) Critical regionalism provides a feasible theoretical basis for the research part of this thesis.

The concept of critical regionalism

The resistance to the flood of placeless internationalization and modernization is the motivation of critical regionalism. Critical regionalism serves as bridges for communications between modernism and regionalism.

Architecture of critical regionalism is a product of distinctive local awareness, which catalyzed by a high level of critical self-consciousness to vernacular architecture. (Frampton 1983, 21) Architecture of critical regionalism is not talking about the imitating of vernacular architecture, but providing an architectural design approach to both regionalism and globalism, rooting in geographical and cultural context, giving attention to modern tradition. (Frampton 1985) In other words, critical regionalism is a dialectic ideology in criticism of global modern architecture. It is also a critical method in evoking the local language of architecture.

Critical Regionalism in a historical context

The term "critical regionalism" was first coined by Alexander Tzonis and Liane Lefaivre. And then, it was developed by architectural historian-theorist Kenneth Frampton.

Alexander Tzonis and Liane Lefaivre (1981, 164-178) review the development of critical regionalism in Greek from a critical political point.

Meanwhile, Kenneth Frampton (1983, 16-25) claims that the development of modern architecture is facing two problems. The first problem is that architecture is commonly defined as an industrial mass production. In order to increase the production efficiency, the relationship between the site and local culture is ignored. The second problem is that postmodern architecture attempts to force people to accept them by enhancing their symbolized meaning and media exposure at the expense of human experiencing. Architecture needs to offer realistic experience trough visual and tactile. (Frampton 1983, 29)

As Tzonis and Lefaivre suggests in the book, Critical Regionalism in the Age of Globalization maintain: "Critical regionalism should be seen as complementary rather than contradictory to trends toward higher technology and a more global economy and culture. It opposes only their undesirable, contingent by-products due to private interests and public mindlessness" (Tzonis & Lefaivre 2001, 8-9)



Fig. 3 Liane Lefaivre and Alexander Tzonis



KENNETH FRAMPTON ON CRITICAL REGIONALISM

“The fundamental strategy of Critical Regionalism is to mediate the impact of universal civilization with elements derived indirectly from the peculiarities of a particular place. It is clear from the above that Critical Regionalism depends upon maintaining a high level of critical self-consciousness. It may find its governing inspiration in such things as the range and quality of the local light, or in a tectonic derived from a peculiar structural mode, or in the topography of a given site.”

— Frampton, Kenneth. 1983. “Towards a Critical Regionalism, Six Points for an Architecture of Resistance”.

In Towards a Critical Regionalism: Six points for an Architecture of Regionalism, Frampton (1983, 16-30) suggests main ideas about critical regionalism.

1. “Culture and civilization”

Optimized technology and highly standardized commercial regulations have limited the possibility of creating a rich urban form to some degree. When the high rise and freeway become the symbol of metropolitan, drawbacks of modernism and postmodernism have started to be obvious. In Frampton’s opinion, civilization started from enlightenment is considered as a rational instrument while culture was defined as expression and reality of civilization. (Frampton 1983, 17)

2. “The rise and fall of Avant-Garde”

Frampton criticizes the vulgar of postmodern architecture. The Avant-Garde, which was acting a progressive, positive and liberate role has fallen to an embarrassing situation. (Frampton 1983, 18-20)

3. “Critical regionalism and-World Culture

Frampton emphasizes the difference between critical regionalism and nostalgic historicism. He proposes that critical regionalism should extract the uniqueness from the regional culture with a systematic, economical and modern method. Hence, critical regionalism could seek the balance between regional culture and universal civilization. To achieve this, the design should remove itself from concrete architecture form and break up eclecticism. The design should consider regional environments, such as light, topography, context, climate and tectonic form. And then, absorbing the benefit of universal civilization critically. (Frampton 1983, 20-23)

4. “The resistance of the Place -Form”

Frampton criticizes urban planning, which is universal placeless. He quotes Martin Heidegger’s view that a boundary is not that at which something stops, but, as the Greeks recognized, the boundary is that from which something begins it’s presenting. (Frampton 1983, 24-25)

5. “Culture Versus Nature: Topography, Context, Climate, Light and Tectonic Form”

Frampton points out some concrete design methods for critical regionalism. Unlike modernism, which tends to standardize and mechanize, brought forth numbers of buildings with similar faces, destroying the regional environment. Critical regionalism should consider the relationship with the site. (Frampton 1983, 26-27)

6. “The visual Versus the Tactile”

Frampton uses Säynätsalo Town Hall designed by Alvar Aalto as an example to stress the importance of “tactile”. Alvar Aalto created a special experience which is not only visual but also tactile in Säynätsalo Town Hall. This experience prevented a “loss of nearness”. (Frampton 1983, 28-29)

In “Towards a critical regionalism: Six Points for an Architecture of Resistance”, Frampton (1983, 16-30) introduces critical regionalism from two parts. The first part is from philosophical and civilized view. The second part discusses that the study of critical regionalism has been rich in shaping the theoretical background and helping the author to establish her theoretical frame in this thesis.

Fig. 4 Frampton, Kenneth

HOW THE THEORY OF CRITICAL REGIONALISM AFFECTS ARCHITECTURE DESIGN IN A STRATEGIC LEVEL

Connecting with regional environment and culture in the site, the thesis reconstruct the key principles of critical regionalism. And then, the author tries to develop a practical design strategy.

Critical regionalism can be analyzed by two parts, awakening of local architecture and criticism of modern global architecture. Local architecture needs to “wake up” critically and rationally.

Architectural design can not copy the shape of vernacular architecture blindly, but interpret indigenous elements in a new perspective. The design needs to consider the regional natural conditions, such as, climate, light, topography. Meanwhile, the design needs to combine with modern technologies. Last but not the least, the local cultural vention, such as faith, Fengshui, historic spot is also an important elements in seeking regional spatial intentions.

All in all, the basic design strategy of critical regionalism is combining environment, regional cultural vention and modern technologies in architectural design with an open-minded and critical attitude in a rational design process.

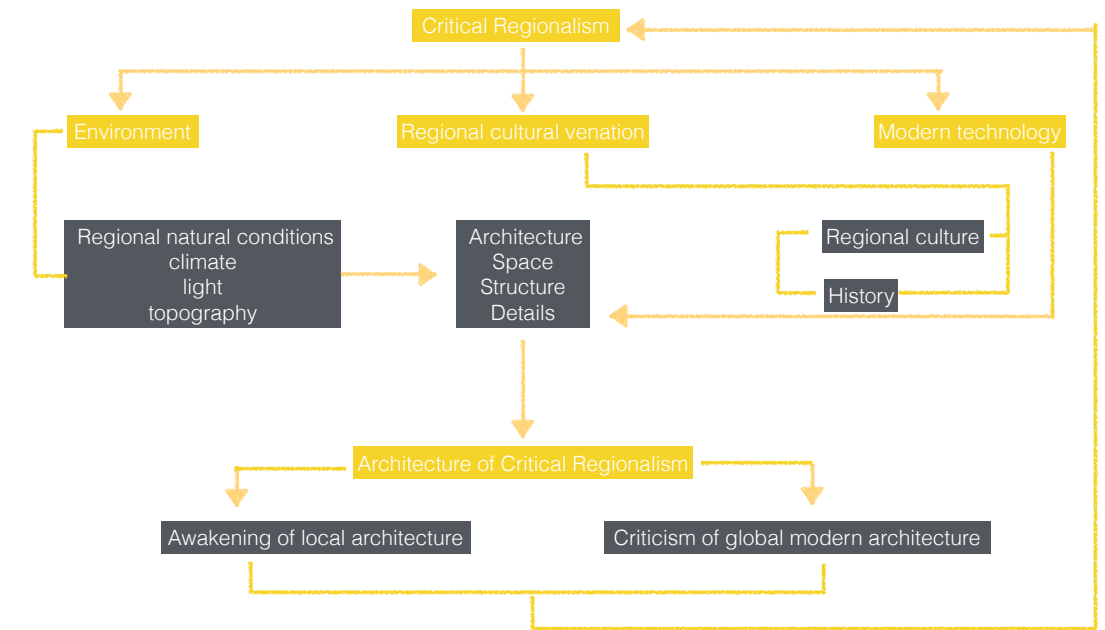


Fig. 5 Concept of critical regionalism (Ming 2008, 7)

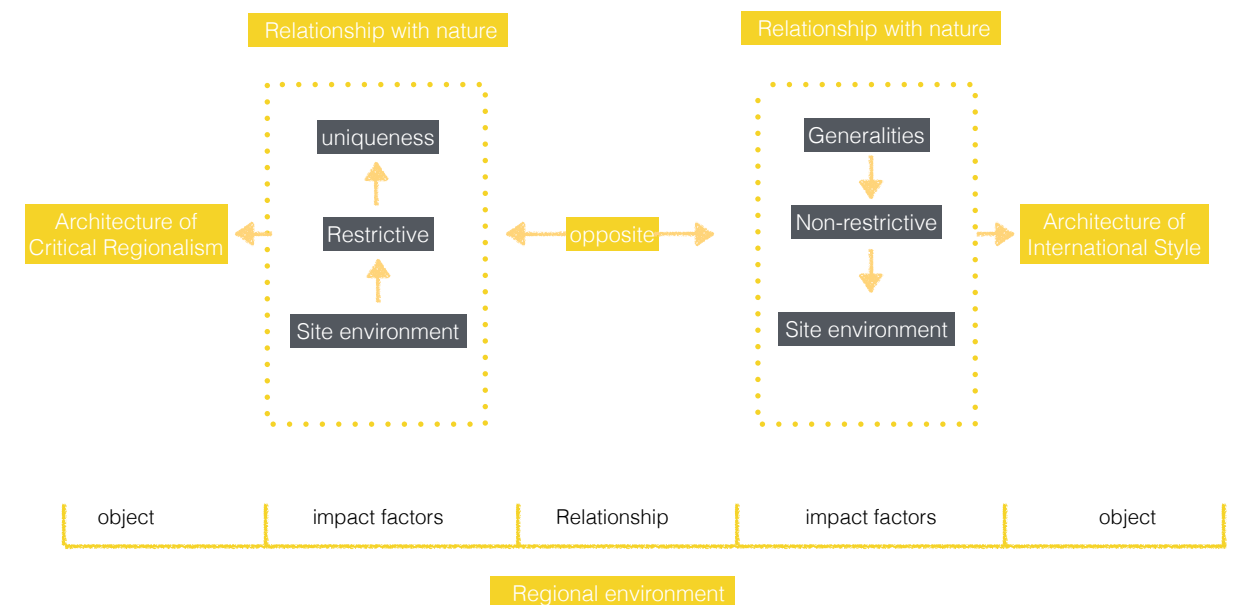


Fig. 6 The relationship with regional environment (Ming 2008, 5)

The relationship with regional environment

Critical regionalism emphasizes the relationship between architecture and regional environment. The uniqueness of every architecture comes from the limits of the regional environment. The particular design needs to respond the limits of the regional environment. The idiosyncrasy comes from the interaction between limits and responds to limits. Without the limits of the regional environment, the uniqueness has no effect anymore. However, unlimited number of copies of architecture in international style ignore the limits of the site with the convenience of modern technology.

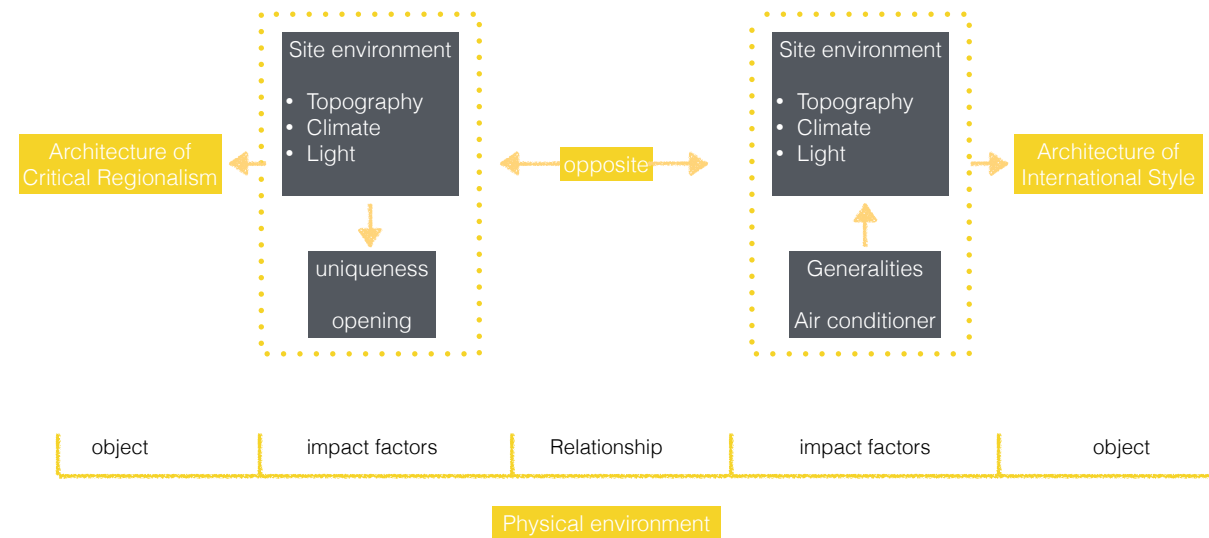


Fig. 7 The relationship with physical environment (Ming 2008, 6)

The relationship with physical environment

Critical regionalism suggests that design need to respect the physical environment such as topography, climate, and light. The design needs to respond the uniqueness of the physical environment. For example, the sloped roof is designed for drainage in a rainy climate, the inner yard which is designed for ventilation in a humid environment. Whereas, the architecture of international style uses university technology to deal with the site environment. For example, the air conditioner takes a place of the unique opening.

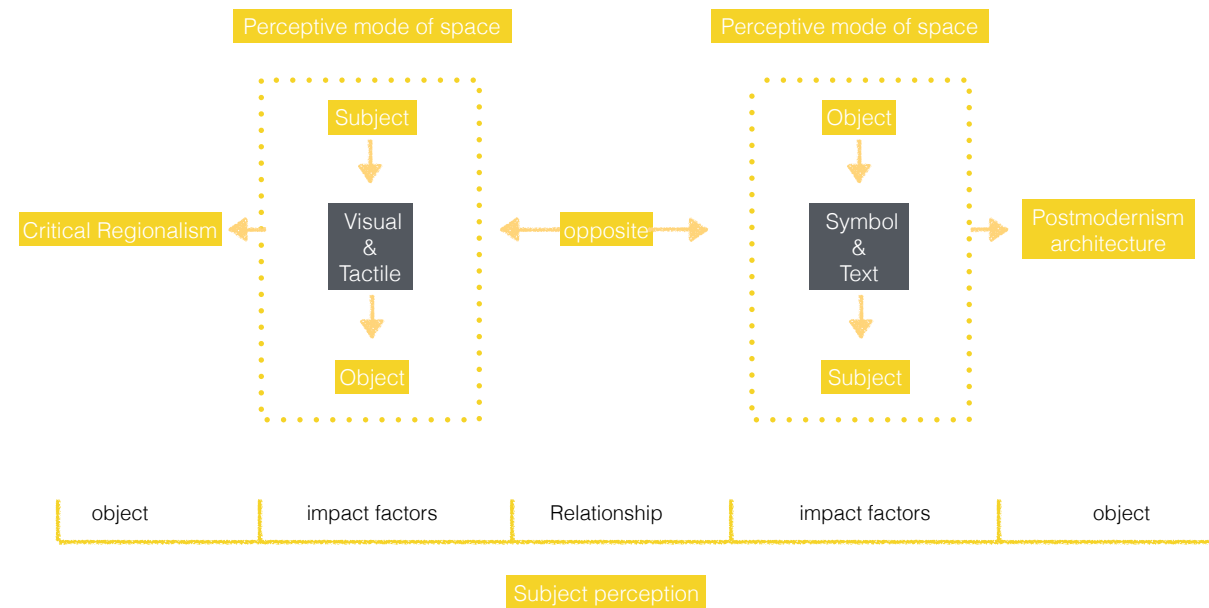


Fig. 8 The relationship with subject perception (Ming 2008, 6)

The relationship with subject perception

Critical regionalism claims that the environment and space need to be read by the body, visual and tactile. While, postmodern architecture forces people to accept information by symbol and media-industry. Frampton motions, the exterior of the postmodern architecture has been treated as pure technique and pure scenography. Architecture needs to offer realistic experience trough visual and tactile. “The tactile and the tectonic jointly have the capacity to transcend the mere appearance of the technical in much the same way as the place-form has the potential to withstand the relentless onslaught of global modernization” (Frampton 1983, 29).

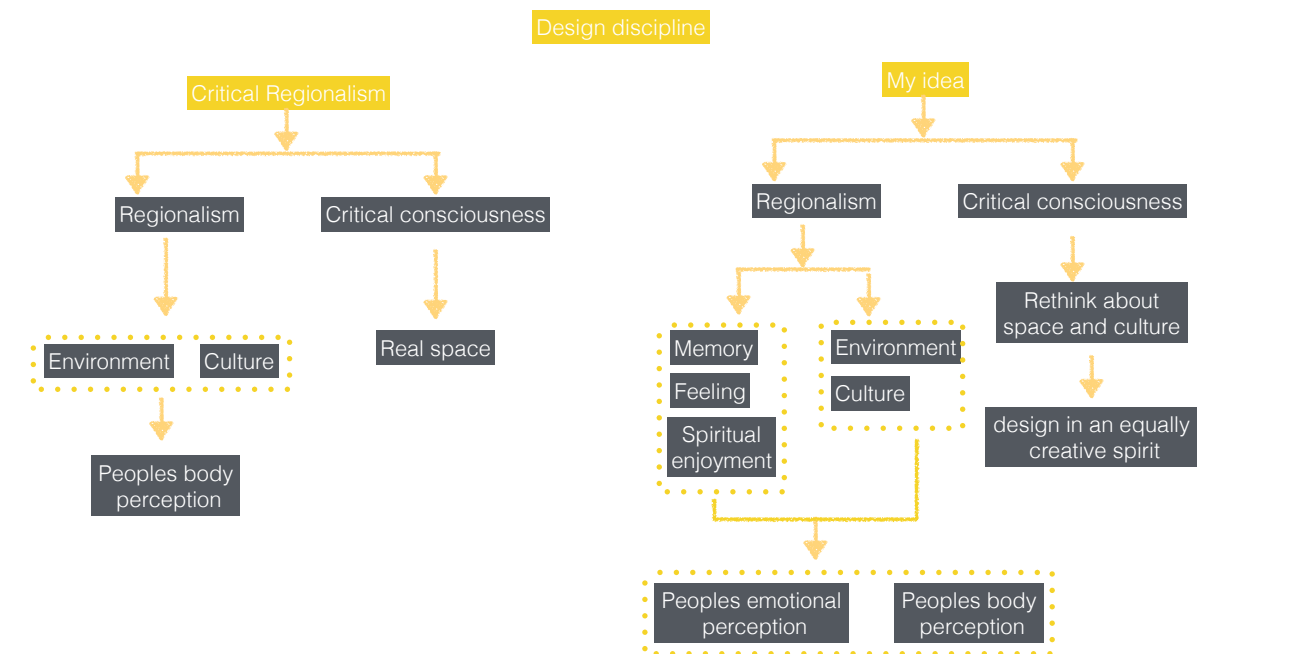


Fig. 9 The author's design strategy

Critical regionalism focuses on the local uniqueness. Meanwhile, it keeps the practical attitude with modernization and absorbing it critically. According to the practical situation, the thesis tries to develop the design strategy. Besides the physical perception, emotional perception is also an integral part in re-interpreting vernacular architecture.

Frampton points out the importance of tactile, as an important dimension in the perception of build form, in critical regionalism(1983, 28). However, he does not emphasize the importance of emotional perception. The creatively implementing of local elements, carrying a strong memory, can trigger people's emotional response. Just as Wang Shu' Ningbo museum produces an architecture that is rooted in the physical memory of past and inspire a high emotional content.

The author thinks that the high emotional and cultural quality of critical regional architecture is an essential part for saving people from an identity crisis. This is what internationalization and modernization can not provide.

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Empirical Study

Case study on the architecture of critical regionalism designed by Wang Shu

A similar emotional resonance is evident in the Ningbo museum designed by Wang Shu, a Chinese architect based in Hangzhou, Zhejiang Province, who won the Pritzker Prize, the world's top prize in architecture. (Fig.13) The bricks and tiles used in the facade of the building were recycled from the other constructions that were demolished by urban construction. The old bricks and tiles carried the ethnic memory. Wang Shu has learned from the construction of local buildings. He has conducted plenty of studies and tested on the construction of the brick wall. In his opinion, the construction technique was original from the local house. Local people used to use discarded materials, layering bricks, tiles and stones to fix holes of the houses. He has utilized this constructing technique on a bigger scale. And then, he has brought them into architecture creatively. The Ningbo museum succeeds in re-interpreting local language of architecture. Hence, this design invokes an emotional response from local people. Some old local people even visit the museum frequently, not for acquiring the knowledge from the museum but purely to sense and enjoy the atmosphere, which is generated by the building. These local people point out that they are able to regain their lost memory towards demolished houses and villages from this museum.



Fig. 10 Architect Wang Shu

Wang Shu not only succeeds in creatively using materials on the facade, but also transforming a physical memory of materials to a highly emotional content. He adapts Chinese cultural identity into his unique design philosophy. He makes his own choice on being local or being global. He has succeeded in balancing globalism and localism. The success that he has achieved has become a good example to resist the "mainstream" of global architecture.

Pritzker Prize jury chairman, The Lord Palumbo, spoke from his home in the United Kingdom, quoting from the jury citation that focuses on the reasons for this year's choice: "The question of the proper relation of present to past is particularly timely, for the recent process of urbanization in China invites debate as to whether architecture should be anchored in tradition or should look only toward the future. As with any great architecture, Wang Shu's work is able to transcend that debate, producing an architecture that is timeless, deeply rooted in its context and yet universal." (Basulto 2012)



Fig 11, Ningbo museum gets conceptual inspiration from mountains and water



Fig 12, Features of local residences (right) are reinterpreted in Ningbo museum design (left).

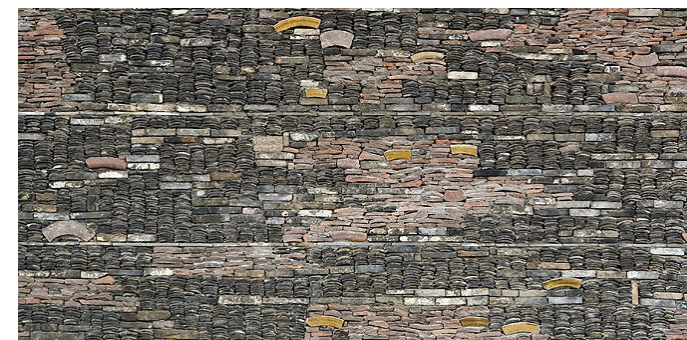


Fig 13, Discarded materials, layering bricks, tiles and stones are creatively used in the facade. This construction method was a common way to fix holes of houses in old days.



Fig. 14, The facade decoration of Ningbo museum is made in two ways. Some walls are decorated by discarded materials. Cement-covered bamboos are used in other walls.

Case study on the architecture of critical regionalism designed by I.M.PEI

Suzhou museum, designed by I.M.PEI, a Chinese-American architect, shows another solution in solving the conflicts between globalism and localism. The Suzhou museum is located in a historic district and surrounded by Chinese traditional gardens with more than one thousand years of history.

He was asked to design a museum that should be modern and also in “Suzhou style”, which is defined as a classical Chinese garden style with a long history. It is a challenge to design a modern museum in a historic district, which has strong local features. But, I.M.PEI has managed to establish a well relationship between them. (Fig. 16) The museum is in harmony with the local town.

He has succeeded in creating a meaningful new language for the Suzhou museum, from design strategy to details. Furthermore, the most impressive thing in the Suzhou museum is that I.M. PEI has continued his own design language, merging traditional architecture elements with modern design elements based on simple geometric patterns, in reconstruct traditional Suzhou architecture elements. The traditional organic architecture frame was replaced by squares, rectangles and pyramids in a harmony way.

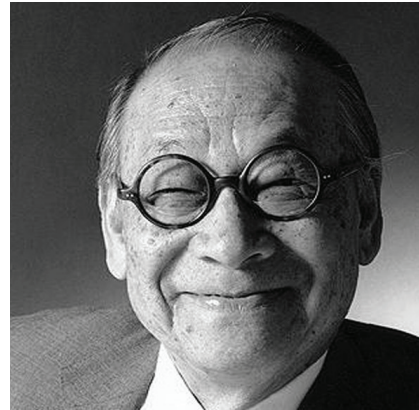


Fig. 15 Architect I.M.PEI

With his Suzhou Museum design, Mr. Pei said, he hopes to encourage and even inspire China, which is in the midst of a frantic building boom, to consider its own rich traditions, to be neither a slave to the past nor an weak imitator of the West. (Barboza, 2006)



Fig. 16, Bird view of Suzhou museum. The museum is in harmony with the local town.



Fig. 17, Entrance of Suzhou museum



Fig. 18, Material comparison between Suzhou museum and traditional building. Suzhou museum uses modern materials such as grey granite, steel, glass, concrete to reinterpret traditional materials like white-washed plaster wall, dark grey clay tile roofs.



Fig. 19, The design of Suzhou museum merging traditional architecture elements with modern design elements based on simple geometric patterns.

Case study on boutique hotels in China



Resort name	Location	Price(RMB/night)	Value	design style	activities & facilities
Banyan Tree	Lijiang (mild climate)	2500-37,605	naturally-luxurious,ecological sensitive,culture-aware experiences	nature wildness mixed with local architecture style	spa,yoga sessions, outdoor tennis court, tours&treks,dining,gallery, corporate Events, weddings, theme parties,accommodation
Brilliant resort&spa	Chongqing (hot summer, cold winter)	2500-37,605	classic, elegant ,nature, health	nature, neo Chinese style	spa, hot spring pools, yoga, tai chi, Chinese medical treatment, Taoism and Teasim health treatment, massage, tea, dining, meeting, accommodation
Naked	Zhejiang (hot summer, cold winter)	3000-15,180	relax,get active and get well, get"naked"	fuse African and Asian elements, sustainable and green building technology	spa, hiking,tea picking, horse riding, swimming, activity center, kids club,gallery, dining, meeting, accommodation,

BANYAN TREE RESORT SPATIAL ARRANGEMENT LIST					
MASTER PLAN		ROOM TYPE			RESORT ACTIVITIES
DESCRIPTION	AREA ¹ M ²	DESCRIPTION	AMOUNT	AREA ¹ M ²	AREA TOTAL
suites & villas	44,000	garden suite	42	150-200	2,250
resort activities	33,500	garden villa	40	335	2,250
natural environment	22,500	pool villa	13	359-428	550
TOTAL	100,000	spa suite	16	435	
		jet pool villa	10	1064-1206	5,050
		presidential villa	1	1208	
		TOTAL	122	44,000	
					spa center
					yoga studio
					gym
					dining
					tea house
					meeting
					shop
					hot spring pools
					beauty center

Fig. 24 Spatial arrangement lis in Banyan Tree Resort



Geography in Hunan province

Fig. 25,
Climate map of China

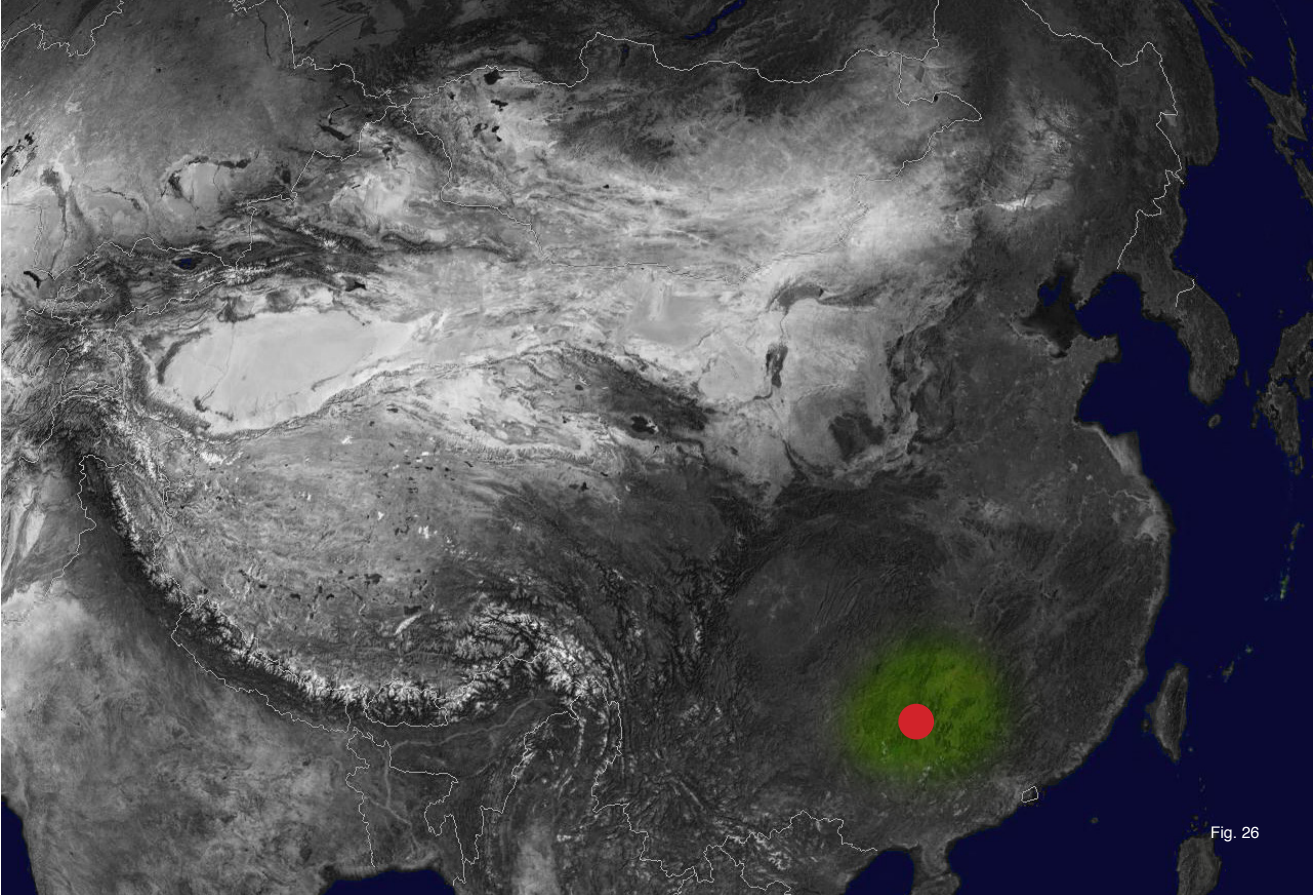
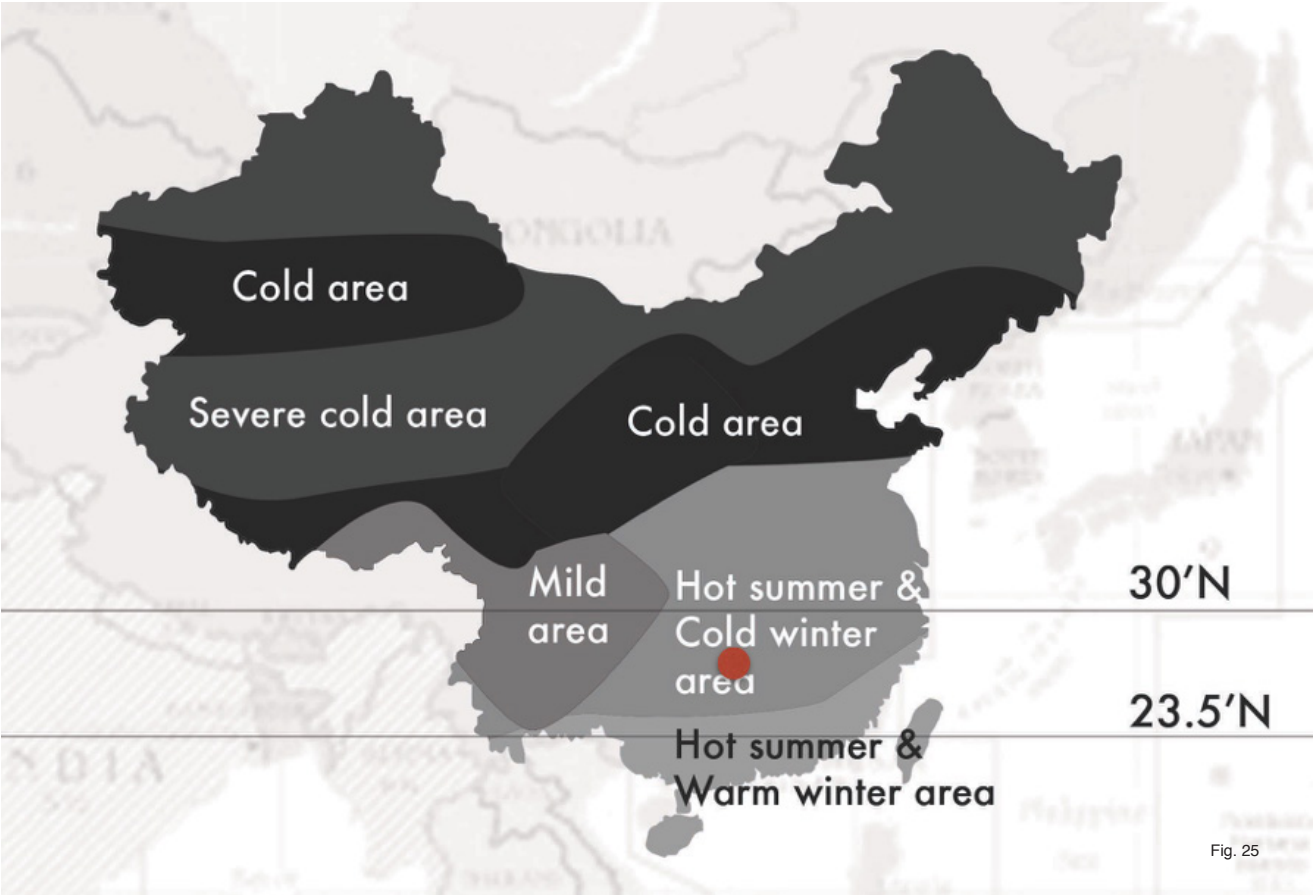
Fig. 26,
Topographic map of
China

Connecting with regional environment and culture in the site, the thesis reconstruct the key principles of critical regionalism. And then, developed a practical design strategy.

Hunan province, located in the south-central part of China. The east, south and west sides of the province are surrounded by mountains and hills. The mountains and hills occupy more than 80% of the area and plains comprises less than 20% of the whole province.

Hunan’s climate is subtropical, and, under the Köppen climate classification, is classified as being humid subtropical (Köppen Cfa), with short, cool, damp winters, very hot and humid summers, and plenty of rainfall. January temperatures average 3 to 8 °C (37 to 46 °F) while July temperatures average around 27 to 30 °C (81 to 86 °F). Average annual precipitation is 1,200 to 1,700 millimetres (47 to 67 in). (Geography in Hunan Province 2015)

The design of vernacular houses in Hunan province was based on regional environment, climate, local culture and local lifestyle.



Research on rural settlements in Hunan Province

Through the study on settlements of local villages, the thesis attempts to discover how local people deal relationship between space combination and topographical condition.

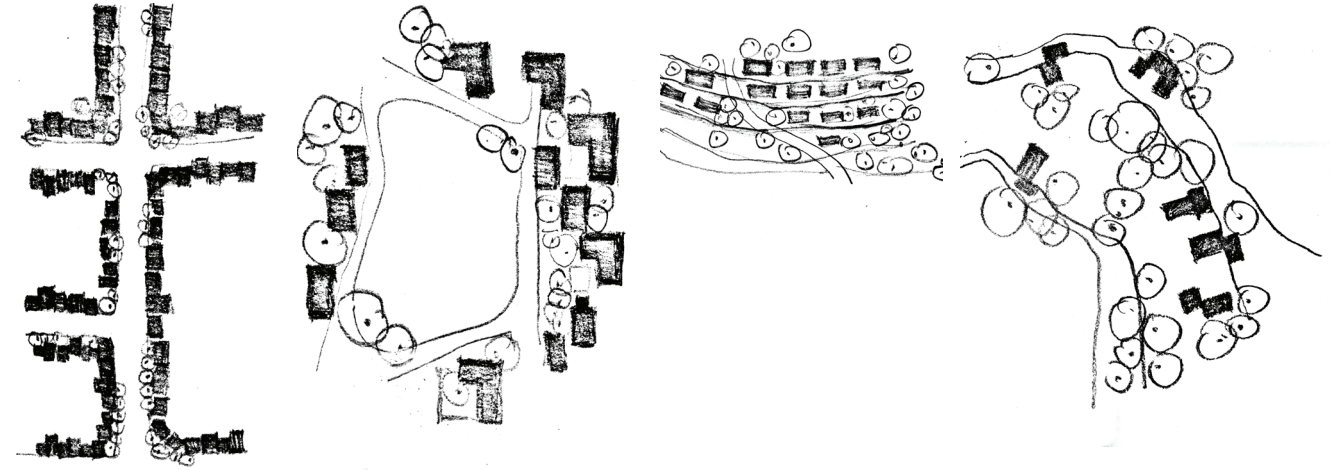
Fig. 27, Zhang Guying village in Hunan Province

Fig. 28, Linear combination

Fig. 29, Group combination

Fig. 30, Contour combination

Fig. 31, Free combination



1 Linear combination, along street and river

The linear combination exists widely in Hunan province. The size of a village can be recognized from the size of the street. .

2 Group combination, surrounding farmland and lake

Farmland and lakes are the lifelines for a village. Villages always have a close relationship with them.

3 Contour combination

Villages adapt to the local topography and arrange the building along the contour line in a parallel manner.

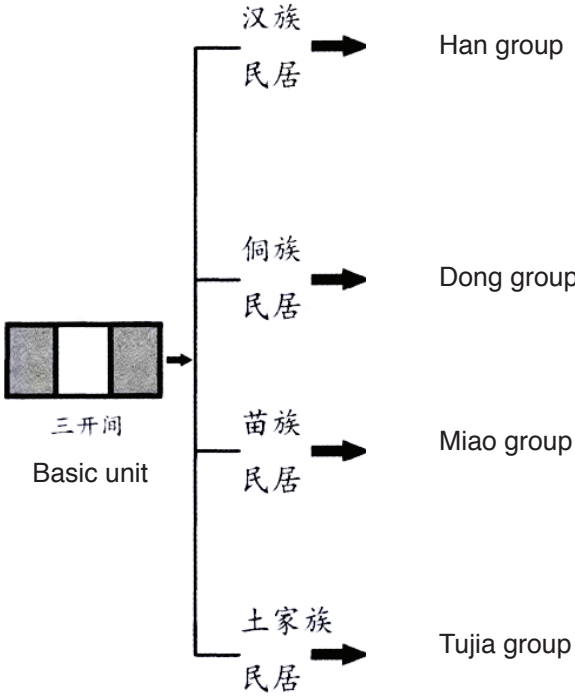
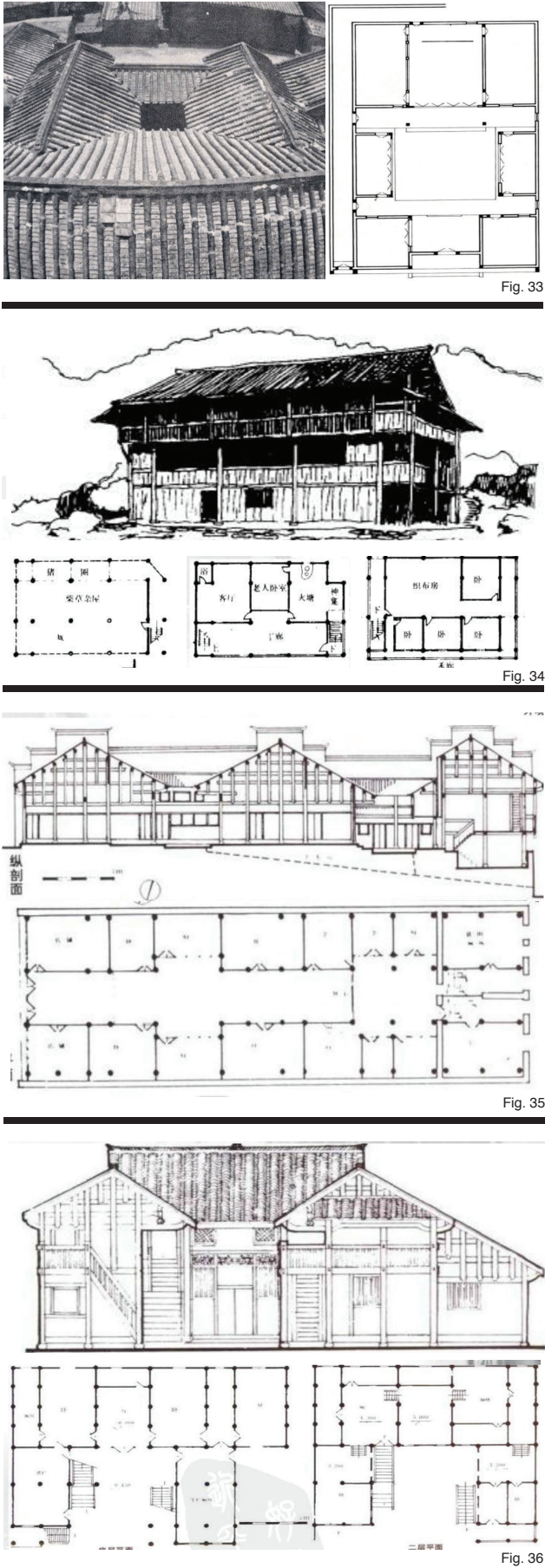
4 Free combination

In remote mountain areas, the buildings are often in a scattered distribution because of the scattered farmlands.

Research on vernacular house layout in Hunan Province

Hunan’s topography is varied and complicated, with mountains, hills, basins and rivers. Furthermore, Hunan province is a multi-ethnic populated area. Hunan has more than four ethnic groups with different lifestyles, including the Han group, Miao group, Dong group and Tujia group. The vernacular houses are complex and varied in different geographical conditions and different ethnic groups’ lifestyles. (Yan & Chen 2010, 49)

Fig. 33 , House layout of Han group (Zheng & Wu 2008)
 Fig. 34 , House layout of Dong group (Zheng & Wu 2008)
 Fig. 35 , House layout of Miao group (Zheng & Wu 2008)
 Fig. 36 , House layout of Tujia group (Zheng & Wu 2008)
 Fig. 37 , Sketch of comparison between different groups (Yan & Chen 2010)



However, a basic construction strategy has been shared in housing layout. The house consists of three basic functional spaces, which are private spaces, semi-open spaces, and open spaces. Semi-open spaces usually serve as living rooms, private spaces are usually used for bedrooms, and open spaces are usually for gardens or yards.

The basic plan of vernacular dwelling houses has orderly layouts and obvious axes. The core of basic local dwelling units is inner yards or living rooms. Functional spaces are symmetrically placed around the core spaces. According to different geographical conditions and ethnic groups’ lifestyles, the basic layout can be developed to more complicated one as needed.

The advantages of this layout are compact and flexible in arrangement, well-ventilated, good lighting and simple beam frame structure.

The layout of hotel design has been learned from the traditional strategies. In the consideration of functional needs, the basic unit was broken up and reconstructed.

Fig. 37

Study on enclosing courtyard “sky well”

An open yard, is normally used in contemporary western architecture. By contrast, traditional Chinese architecture typically use an enclosed spaces, surrounding by building complexes. Those enclosed spaces come in two forms, the:

Courtyard (院): The use of open courtyards is a common feature in many types of Chinese architectures. This is best exemplified in the Siheyuan, which consists of an empty space surrounded by buildings connected with one another either directly or through verandas.

“Sky well” (天井): Although large open courtyards are less commonly found in southern Chinese architecture, the concept of an “open space” surrounded by buildings, which is seen in northern courtyard complexes, can be seen in the southern building structure known as the “sky well”. This structure is essentially a relatively enclosed courtyard formed from the intersections of closely spaced buildings and offer small opening to the sky through the roof space from the floor up. (Knapp, Ronald G. 2006)

The main functions of the enclosing courtyard are lighting, ventilation and drainage. The enclosing courtyard offers shading in summer and lighting in winter. It also provides convenience for lighting the house from both outside and inside. Interior can gain a vivid lighting effect and natural ventilation in hot and sticky summer. Nature light, which comes from enclosing courtyard leads the eye-sights from clutters in the house to landscapes in the yard.

Fig 38 --- Fig 42 Enclosing courtyard in Hunan province



Study on material and structure

The materials used in vernacular dwelling houses are made of wood, clay bricks, stones, tiles. The footing of walls is made of stones because of the long humid summer. Stones are mined and produced locally, which is considered to be energy-efficient and environmental-protection oriented. The materials of walls are varied for different economic conditions. Most normal families use mud bricks or rammed earth for walls. Some families use wooden walls. In a rich family, gray bricks are used in outer walls and mud brick walls and wooden walls are used in the interior to separate spaces. The structure beams and columns are generally made of wood.

The typical structure in Hunan vernacular architecture is consist of load-bearing wooden columns and beams, rammed earth outer walls, as well as wooden or mud-brick interior walls. (Zheng & Wu 2008, 129-133)

Fig. 43 --- Fig. 45 Mud bricks or rammed earth for walls

Fig. 46 Wooden wall

Fig. 47 Gray bricks in outer wall



How to transfer regional elements into modern spatial design?

The objective of this research is to discover how the vernacular architecture respects the site and connects with the site. It helps in discovering how to reinterpret local culture and how to bring the local language of architecture to the spatial design with a critical and open attitude.

The site locates in a hilly terrain, surround by forests. It is important to well-establish a relationship between building volumes and nature landscapes.

The design elements, which are suited modern demands are mostly extracted from vernacular architecture, such as, the house layout, interior, structure systems and materials. Some local elements that do not meet the modern demand any more will be abandoned. Consequently, the rest of potential design elements will be reinterpreted and reconstructed rationally and critically before bringing into the design.

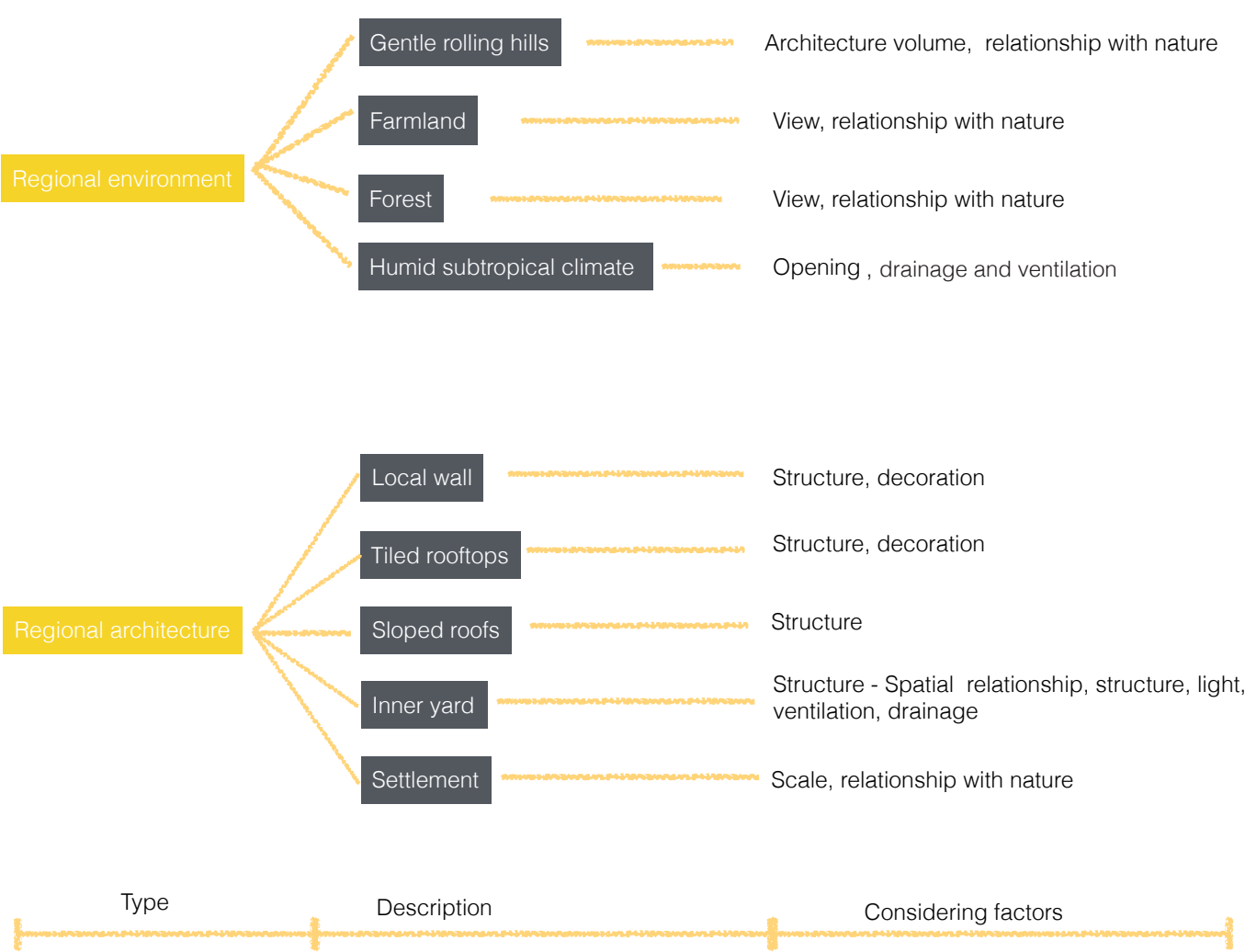


Fig. 48. The method to transfer regional elements into modern spatial design

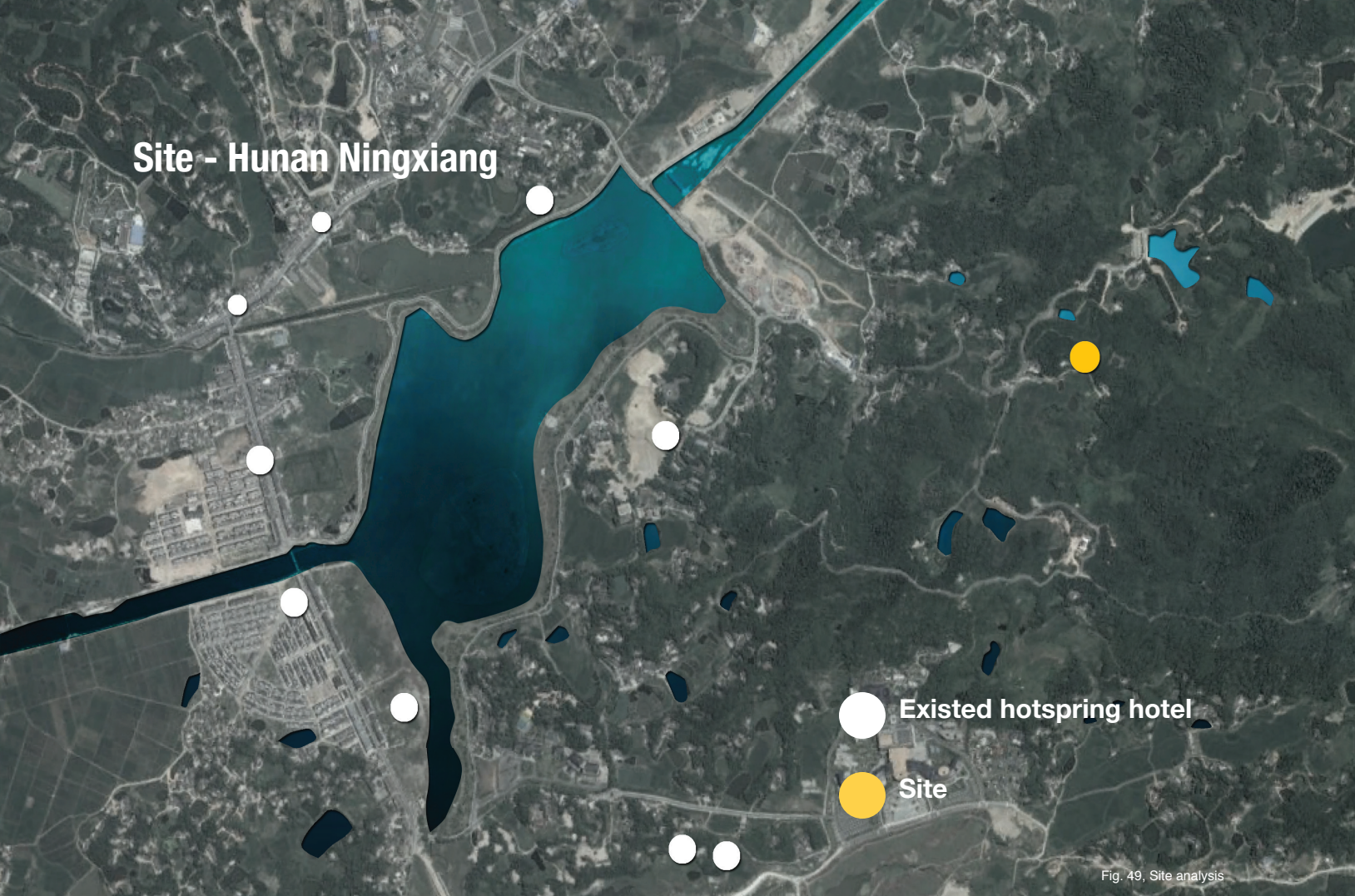
For instance, the axis is very important in traditional Chinese architecture. Functional spaces will always be symmetrical-ly placed around the axis. The first reason why axis plays such an important role in Chinese traditional architecture is that people pay attention to the order of hierarchy. The sym-etry axis layout reflects solemn and sense of order. The second reason is that the Chinese traditional architecture used pre-made frameworks which are considered flexible and convenient. Comparing with other layouts, symmetry axis layout is easier in arranging spaces when use pre-made frameworks. Nevertheless, pre-made frameworks are commonly believed that it may cause monotonicity in architectural styles. In order to make up this shortcoming, people use a series of courtyards with a group of archi-tecture to create a very dynamic and constantly changing space. (Wang & Zhang 1994)

However, with the development of “western moderniza-tion”, people’s lifestyles have been drastically changed. The advantage of symmetry axis might not be obvious. In contrary, the advantages of enclosing courtyard such as lighting, good ventilation, drainage are advisable and prom-ising methods in housing layouts. Furthermore, the sloped roof with tiles performs well in drainage in a heavily rainy climate. Materials mined and produced locally are more en-ergy-efficient and environmental protection-oriented.

After analysis of the local architectural language, those po-tential design elements are brought creatively to the design to respond the uniqueness of regional environment and culture.

I II III IV V

Design



Site analysis

Location: Hunan, Ningxiang, is a village that is famous for hot spring and embraced by hills and quiet, beautiful rural scenery. In recent 10 years, the small town has been developed as hot spring resort because of the rich hot spring resource. In the figure 49, white dots represent existed hot spring hotel and the yellow dot represents the site that is located down the hill and surrounded by forests and farmlands. The site is at a proper distance from downtown and other hotels that can guarantee not only to share the urban infrastructure, but also stay in a relatively quiet and independent nature environment.





Fig. 51, Bird view of hot spring hotel

Concept

Based on site and regional cultural features, the thesis attempts to explore design language that is not only local but also satisfies modern needs. During the research of critical regionalism and local culture, the thesis extracts meaningful design elements from vernacular architecture and bring them into the design. The design of hot spring hotel attempts to combine the natural and regional feature without missing its attributes in satisfying potential customers' physical and emotional needs.

Space combination
Learn form
local community

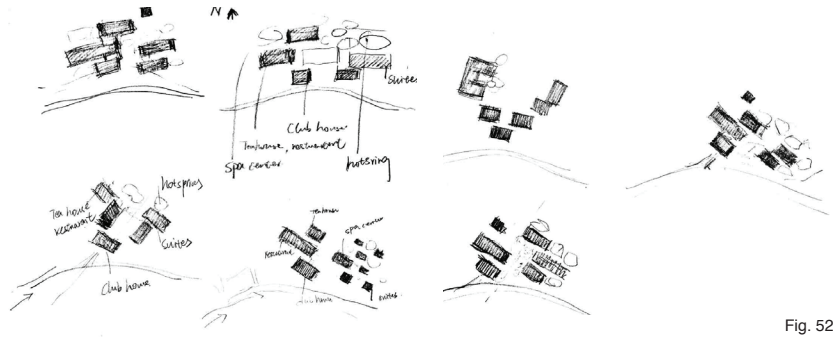


Fig. 52

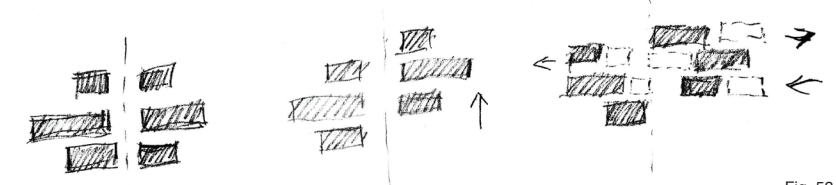


Fig. 53

In figure 53, the layout of site plan absorbs merits of the vernacular house layout. First, the architecture volume has been placed in symmetry. Following, the volumes are moved vertically and horizontally. By integrating with surrounding volumes and simple array, enclosed space and semi-enclosed space are created. This layout performs well in interacting with nature and site.

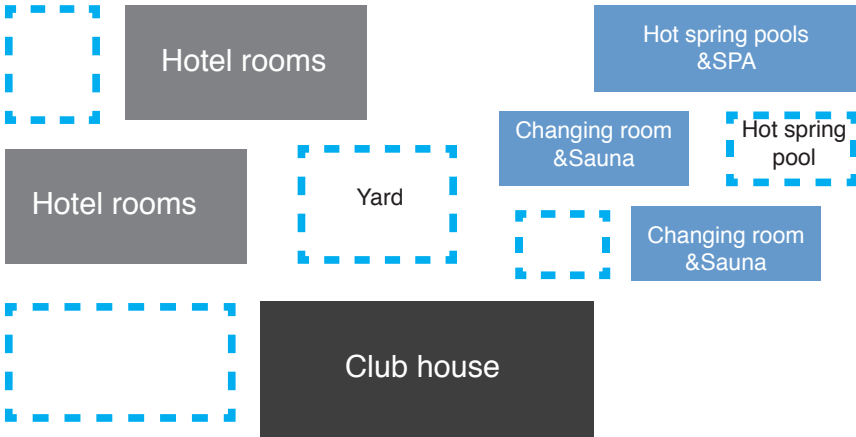


Fig. 54

After the case study of three Boutique hotels in China, the thesis analyzes and summarizes the main functions and areas. According to the size of site and the main functions, as a hot spring hotel, the main activity spaces are divided in three, club house, hotel rooms and hot spring area. More detailed information show in figure 55.

Fig. 52, Sketch of space combination
Fig. 53, Design process of site plan
Fig. 54, Functional spaces arrangement
Fig. 55, Functional list and area

Mater Plan		Activities	
Description	Area m ²	Description	Area m ²
Club house	732	Dinning	256
Hotel room	1623	Cafe	70
Changing room & Sauna	386	Receiption & Waiting area	320
Hotspring & SPA	470	Office	76
Parking	900	Kitchen	62
Court yard	506	Hotel room	1623
Staff living area and storage	800	Female chang-ing room	114
TOTAL	8158	Male Chaning room	114
		Female Sauna	77
		Male Sauna	66
		Spa	112
		Indoor hot spring pools	234
		Outdoor hot spring pools	120

Fig. 55, functional list and area

Architectural design

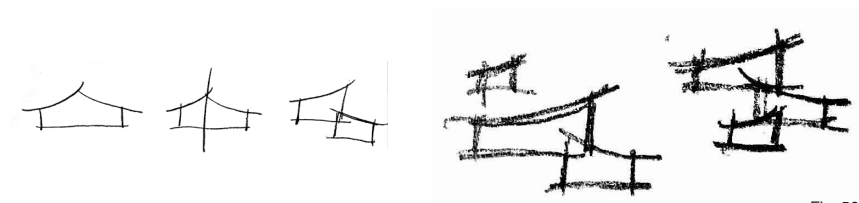


Fig. 56

The sloped roof that has a good water discharge function is kept in design. The basic unit of traditional architecture is cut along the axial line to form two basic volumes with a pitched roof. Then, the cut volumes are placed horizontally and vertically to match the site plan that has enclosed and semi-enclosed space.

Hotel house layout

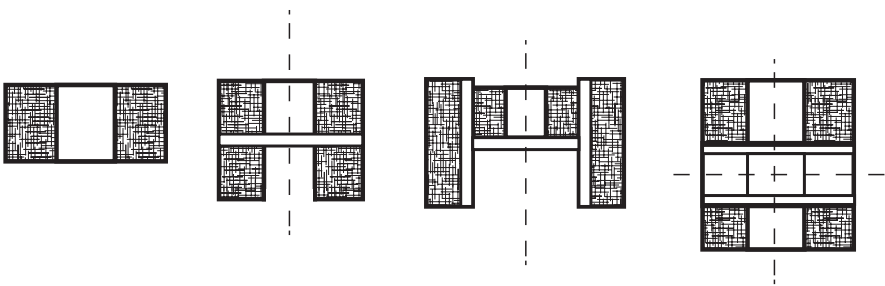


Fig. 57

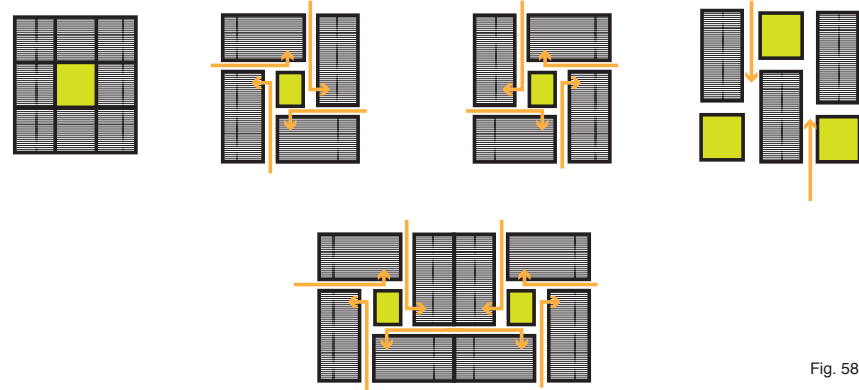


Fig. 58

Fig. 56, Sketch of architectural design

Fig. 57, House layouts of vernacular architecture

Fig. 58, Transformation of house layouts

The house layout of the hotel is based on the basic unit of the vernacular house layout. In the consideration of functional needs, the basic unit was broken up and reconstructed.

Material

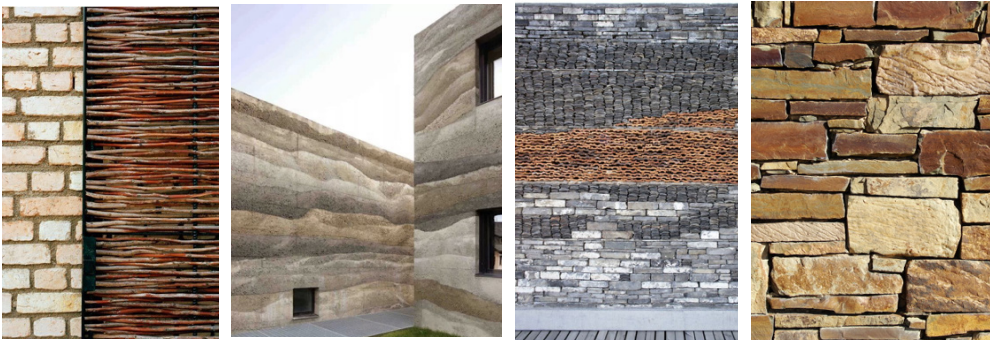


Fig. 59 Material montage

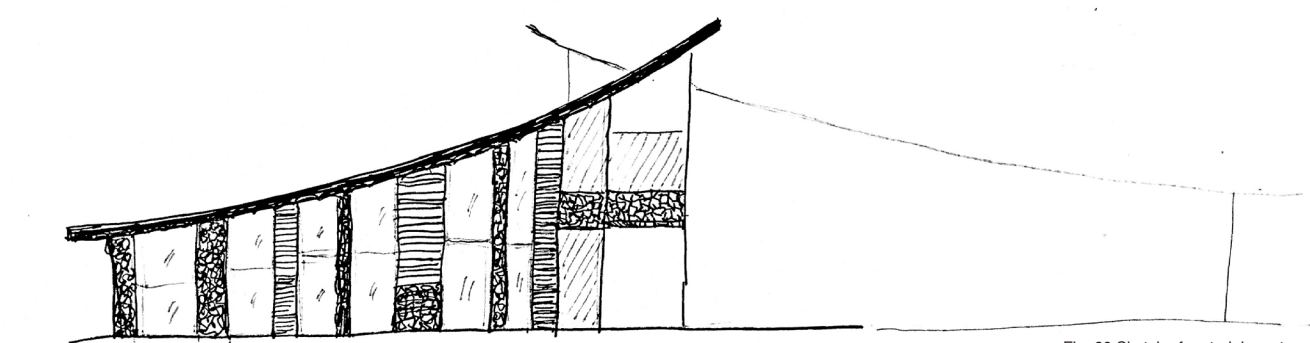


Fig. 60 Sketch of material montage

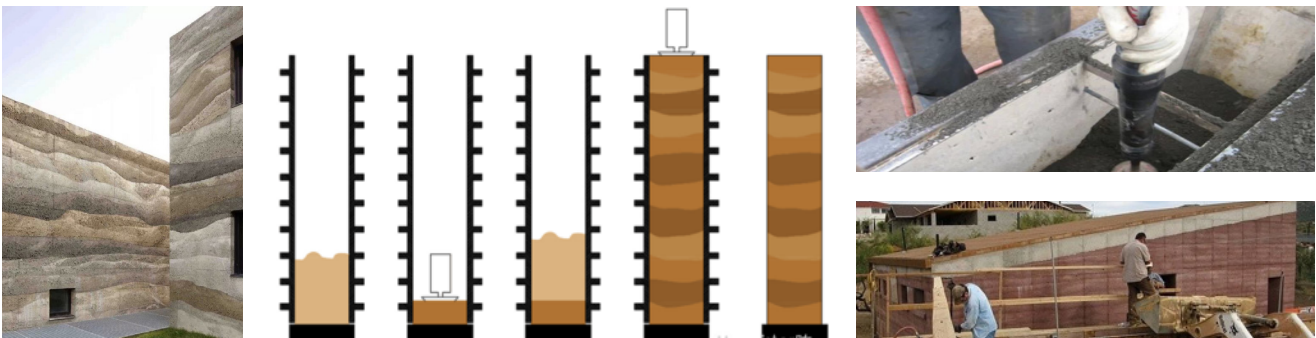


Fig. 61 Construction process of rammed earth wall

Mud-brick, wood, and stone are popular materials in vernacular architecture. Those materials form the fabric of local buildings. They are main mediums of local textural memory. Materials are combined and implemented in a modern way in this project. Rammed earth walls, with modern construction technology, have replaced traditional mud-brick walls and earth walls. Wood and stones are placed creatively on the facade. The innovative texture retains the fabric of local buildings and satisfies the modern needs.

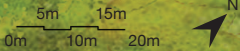
Design | Site plan

The club house is design for public activities such as reception, waiting and dining. Changing rooms and sauna rooms are placed in two symmetrical buildings. Outdoor hot spring pools are placed in a semi-open courtyard surrounded by changing room buildings and indoor hot spring building. This arrangement provides convenience for people to reach different functional place and also enjoy a nice view. The layout of hotel rooms is based on the basic units of the vernacular house layout. Four rooms share an enclosing courtyard with plants or landscape pools. The enclosing courtyard provides good lighting and ventilation conditions. It also serves as a hub of walking path which offers nice views and also protects privacy for each room.

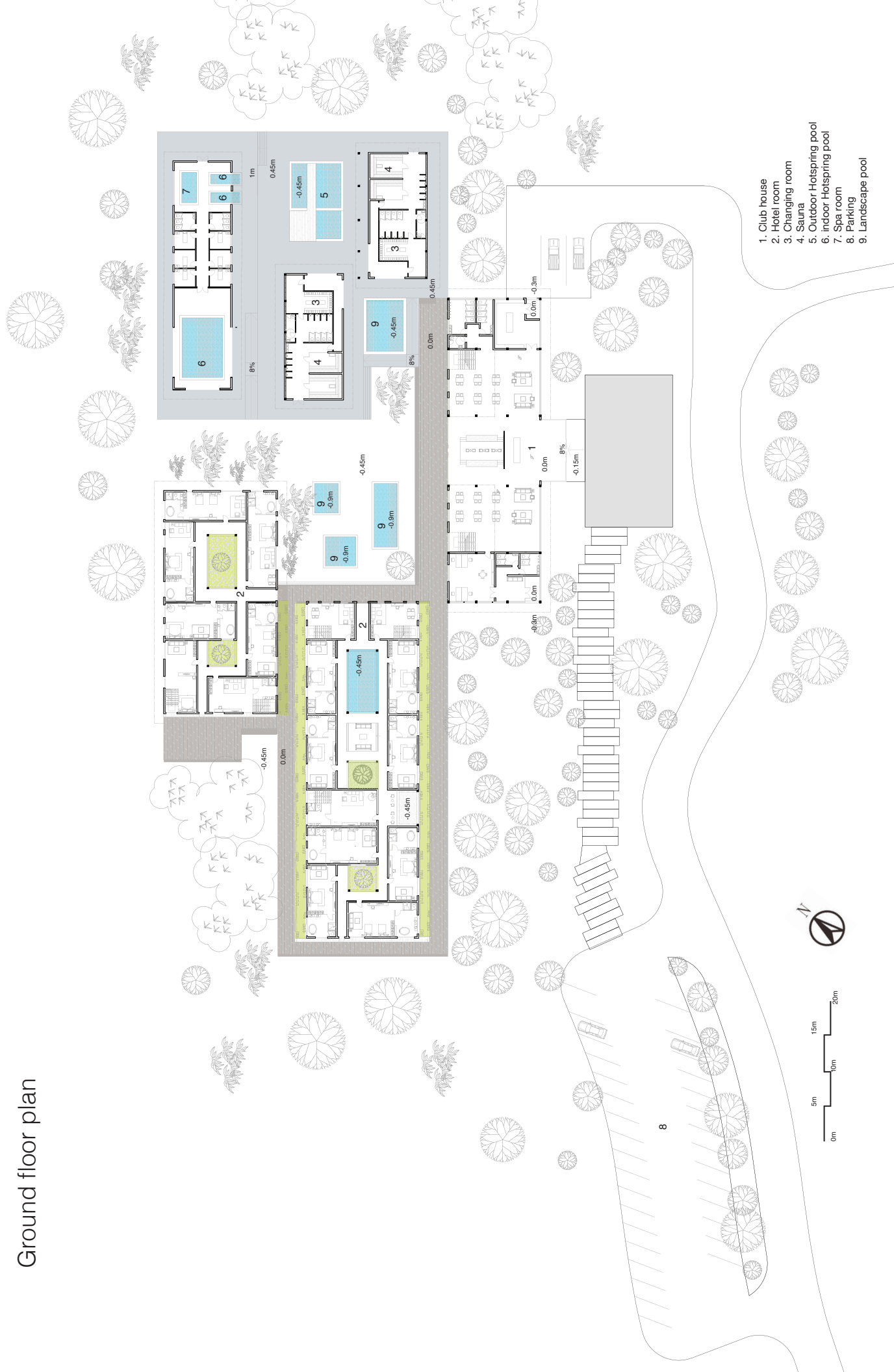
Staff living area
and storage

Parking

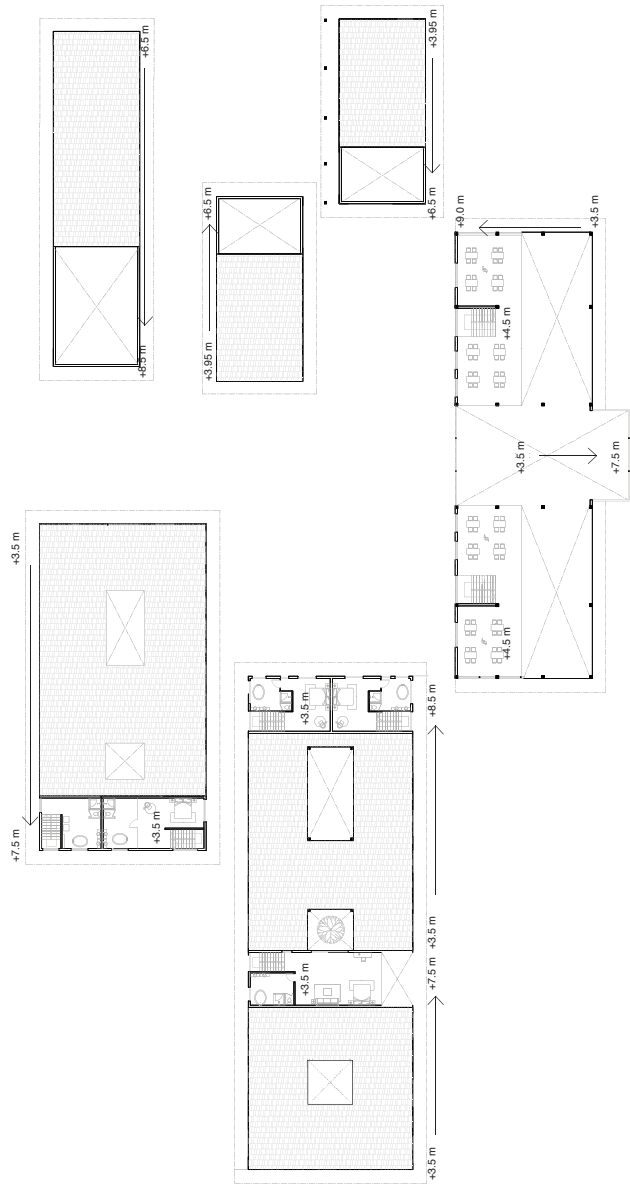
- Club house
- Hotel rooms
- Changing room & Sauna
- Outdoor hot spring pools
- Indoor hot spring pools & Spa



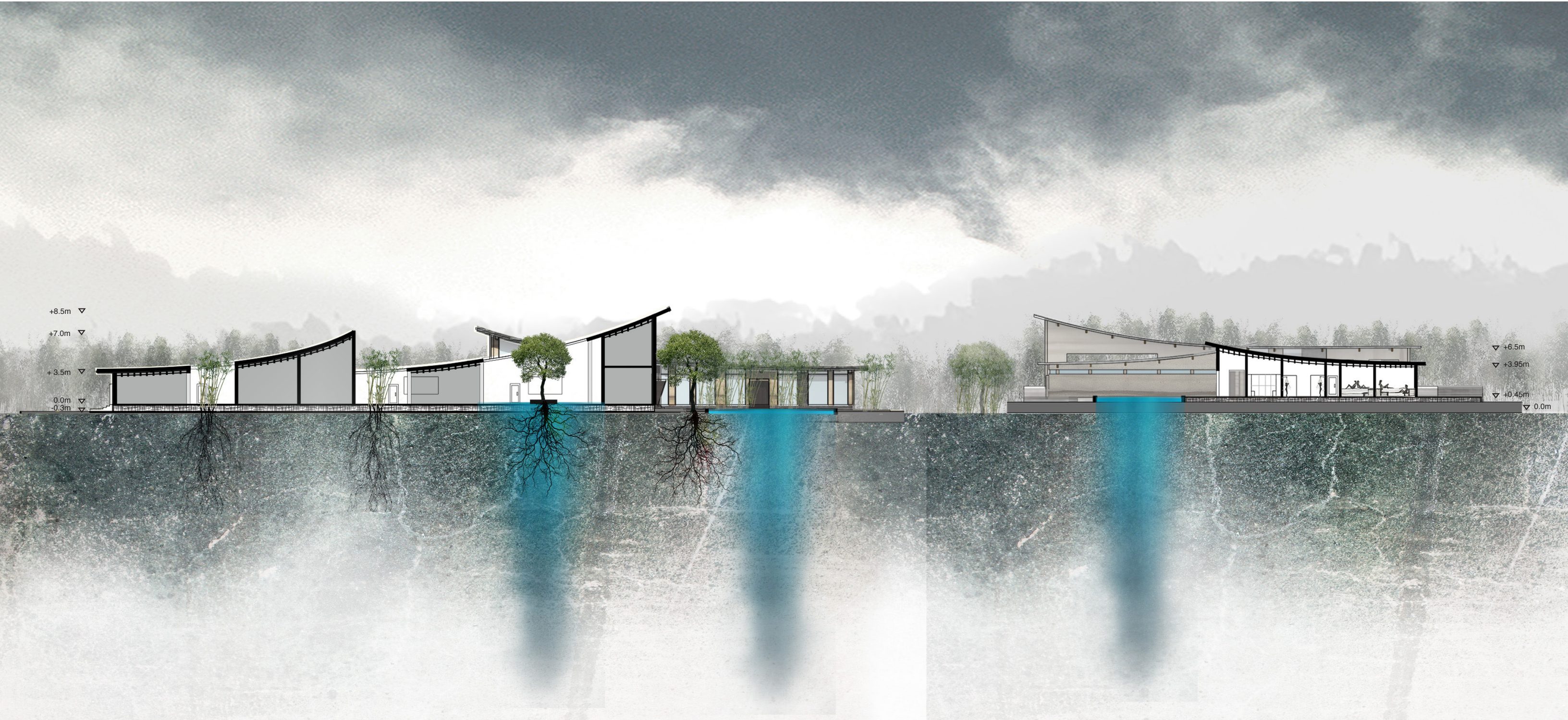
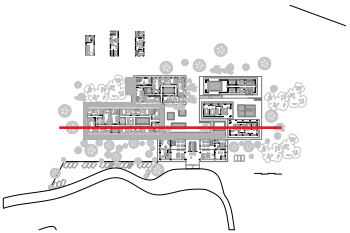
Ground floor plan



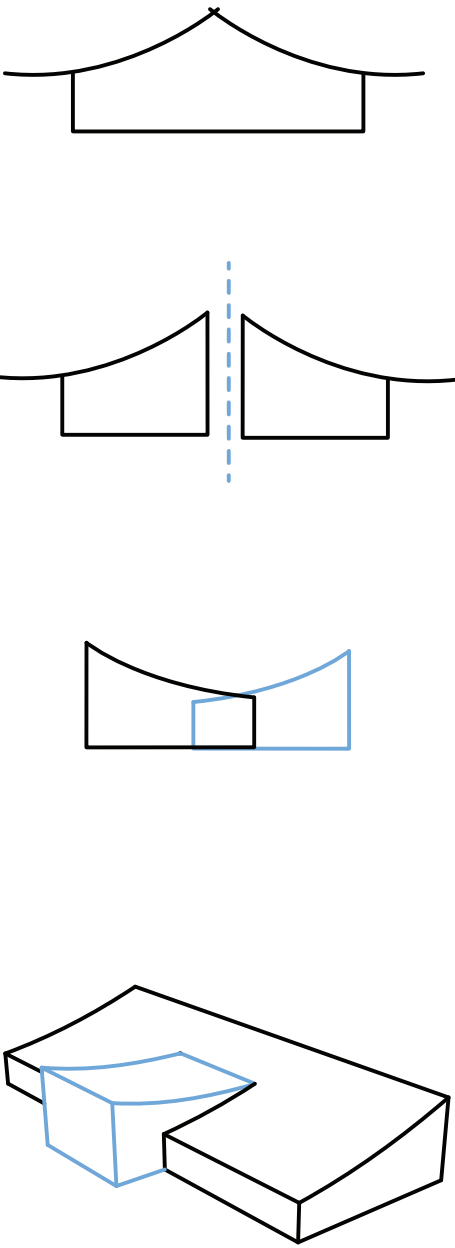
Second floor plan



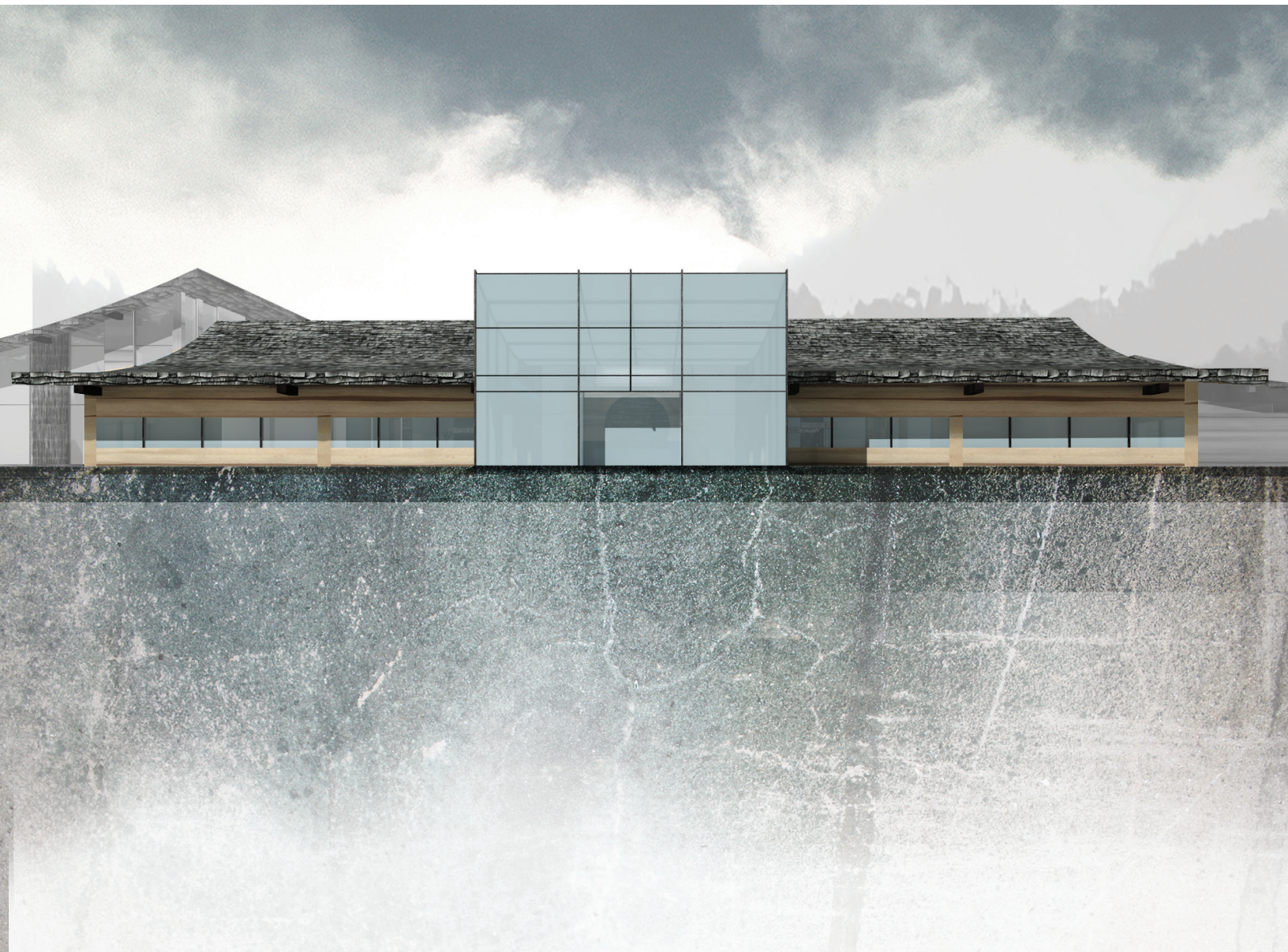
Section



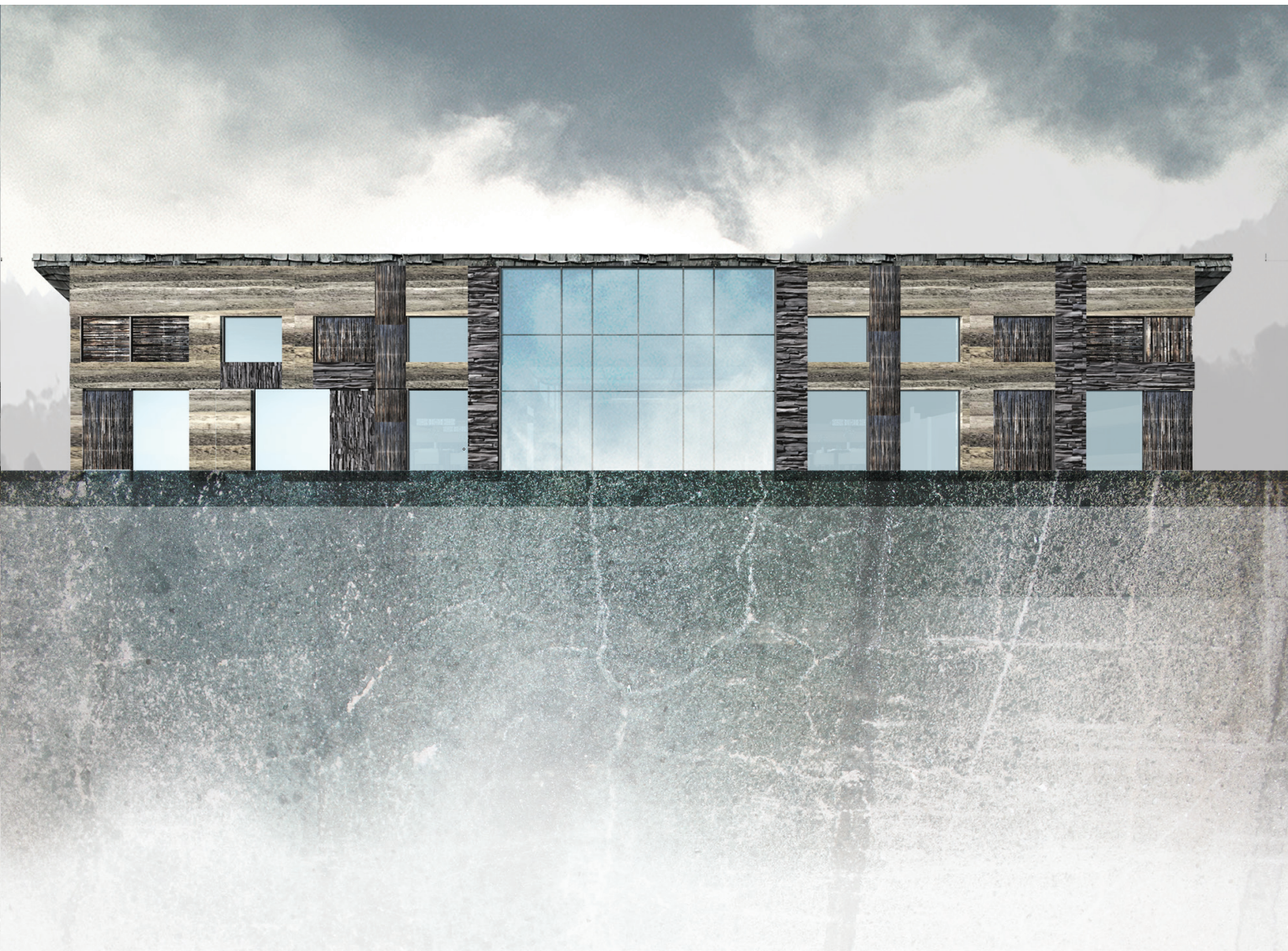
Design I Club house



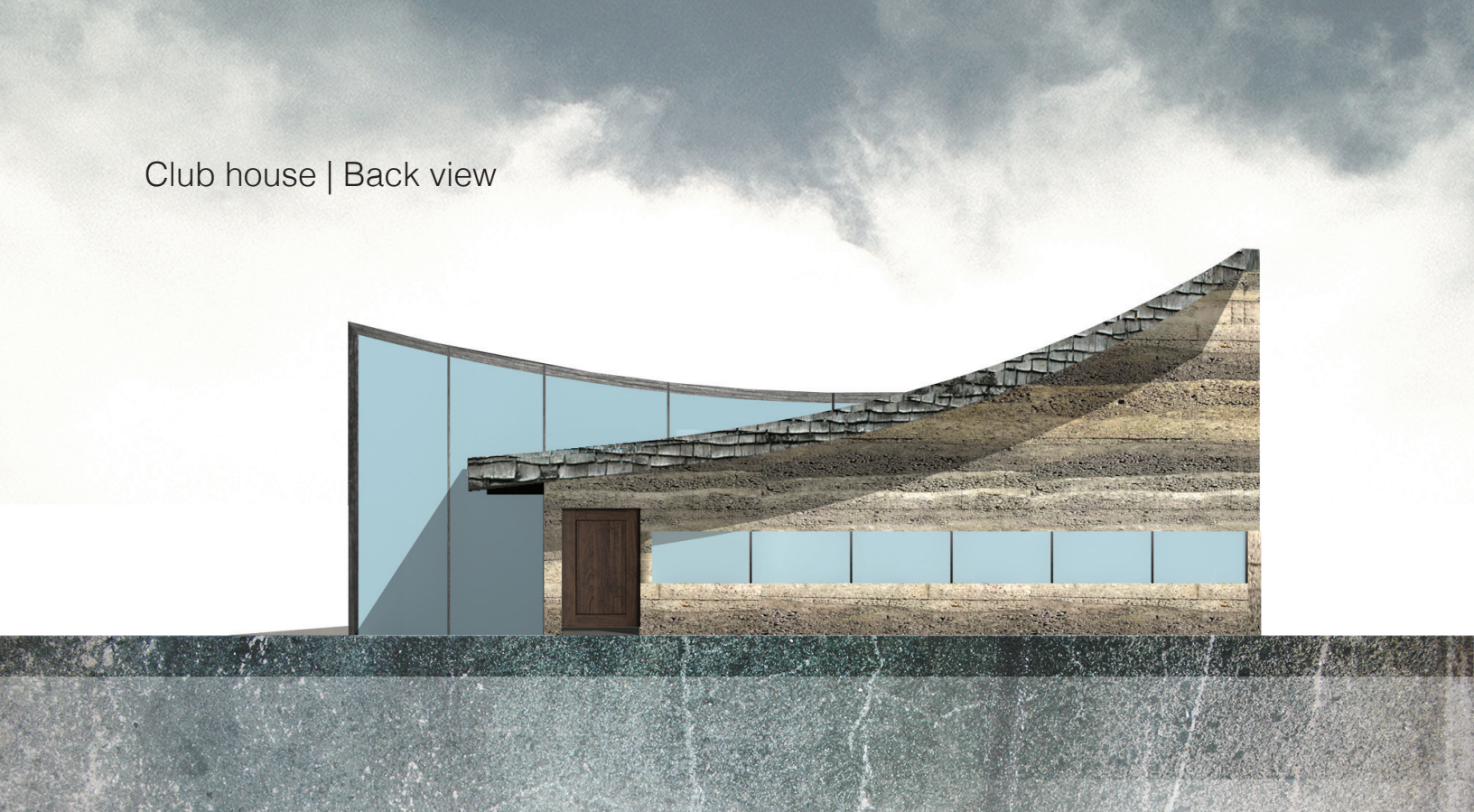
Club house | Front view



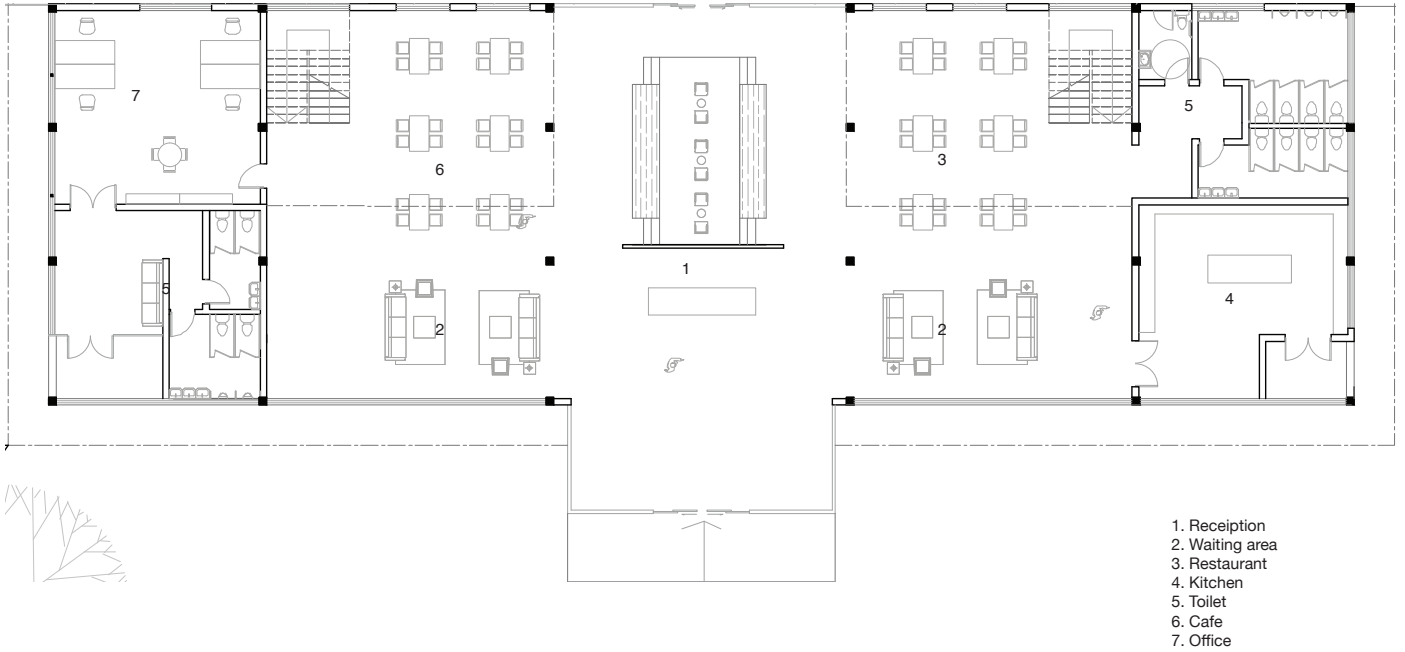
Club house | Back view



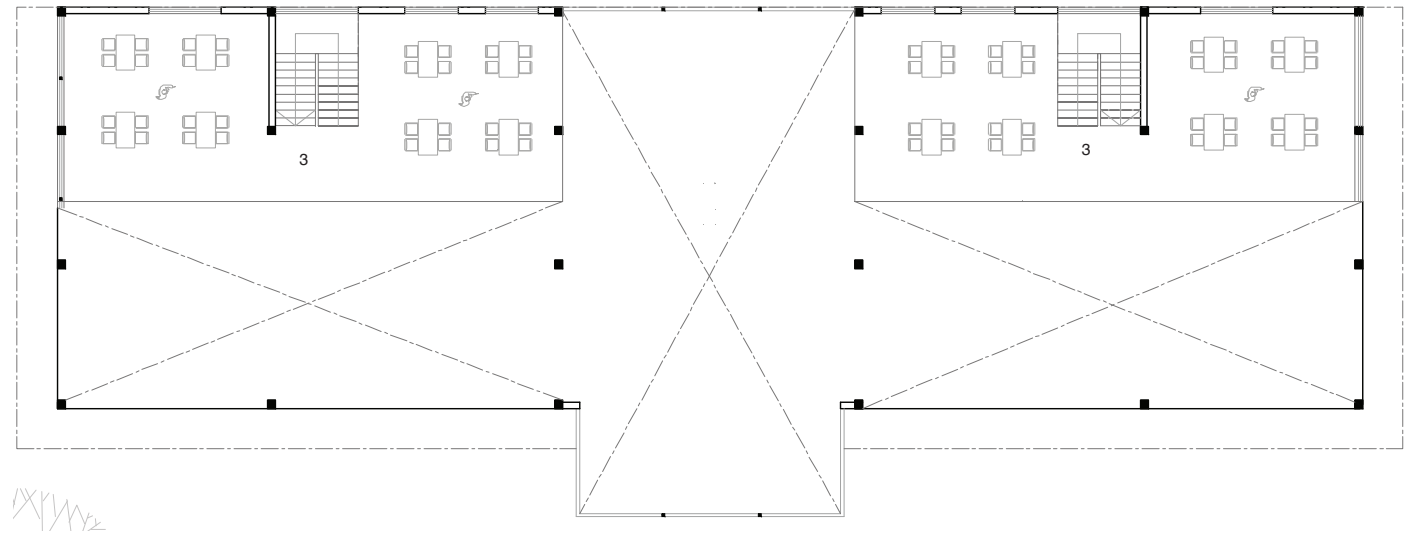
Club house | Back view



Club house | Ground floor plan



Club house | Second floor plan

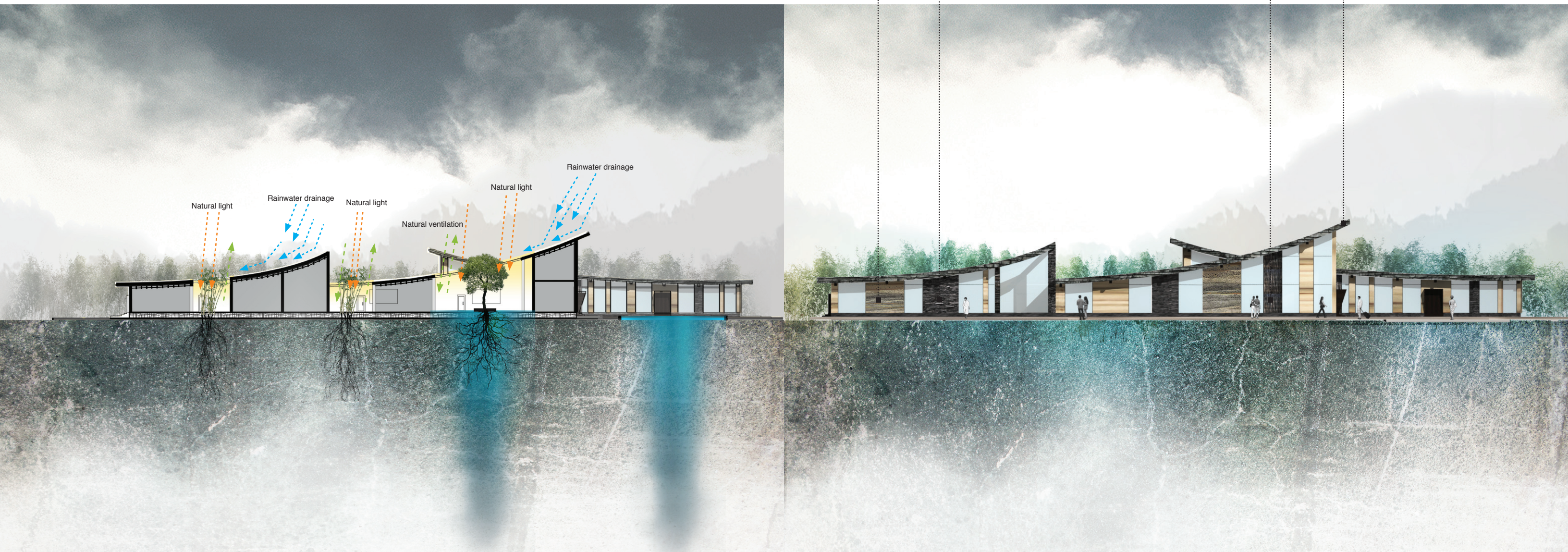
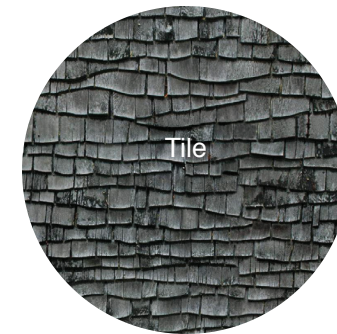
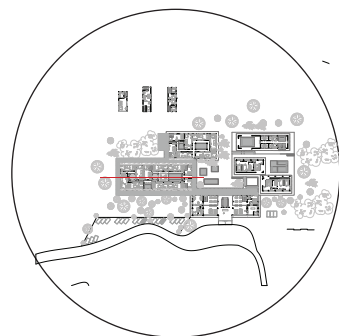


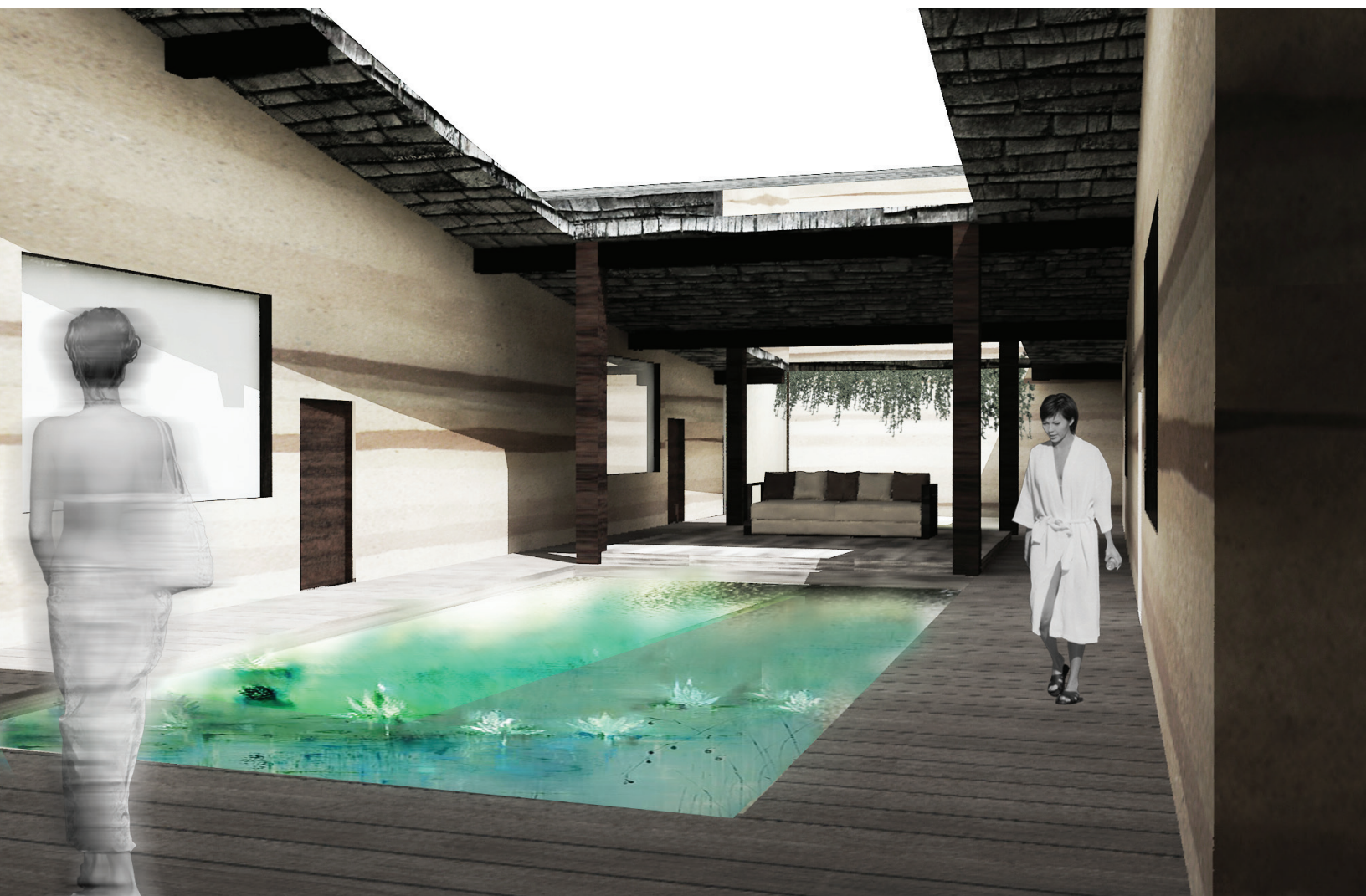
Club house | Reception



Design I Hotel rooms







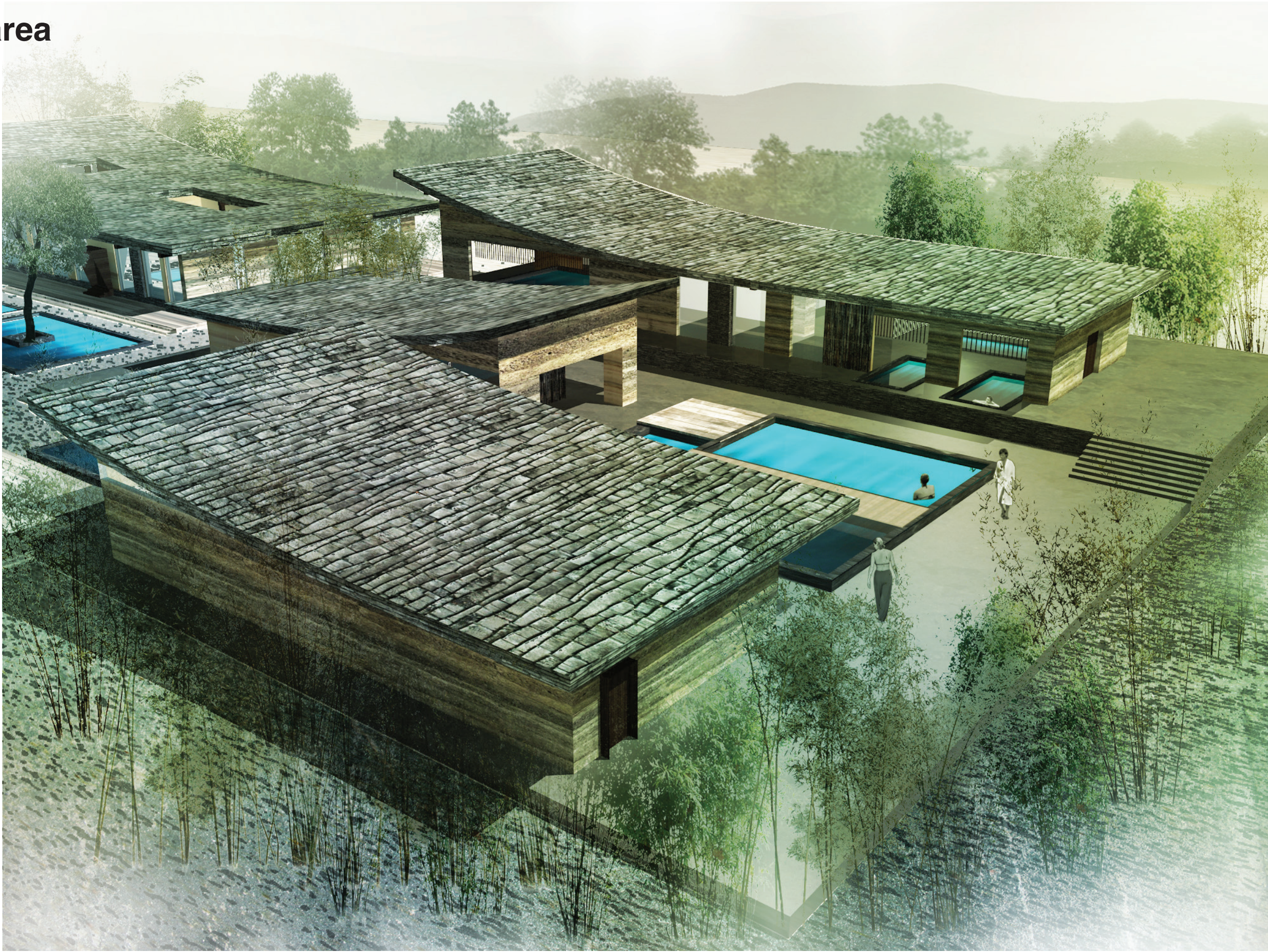
Hotel rooms | Inner garden



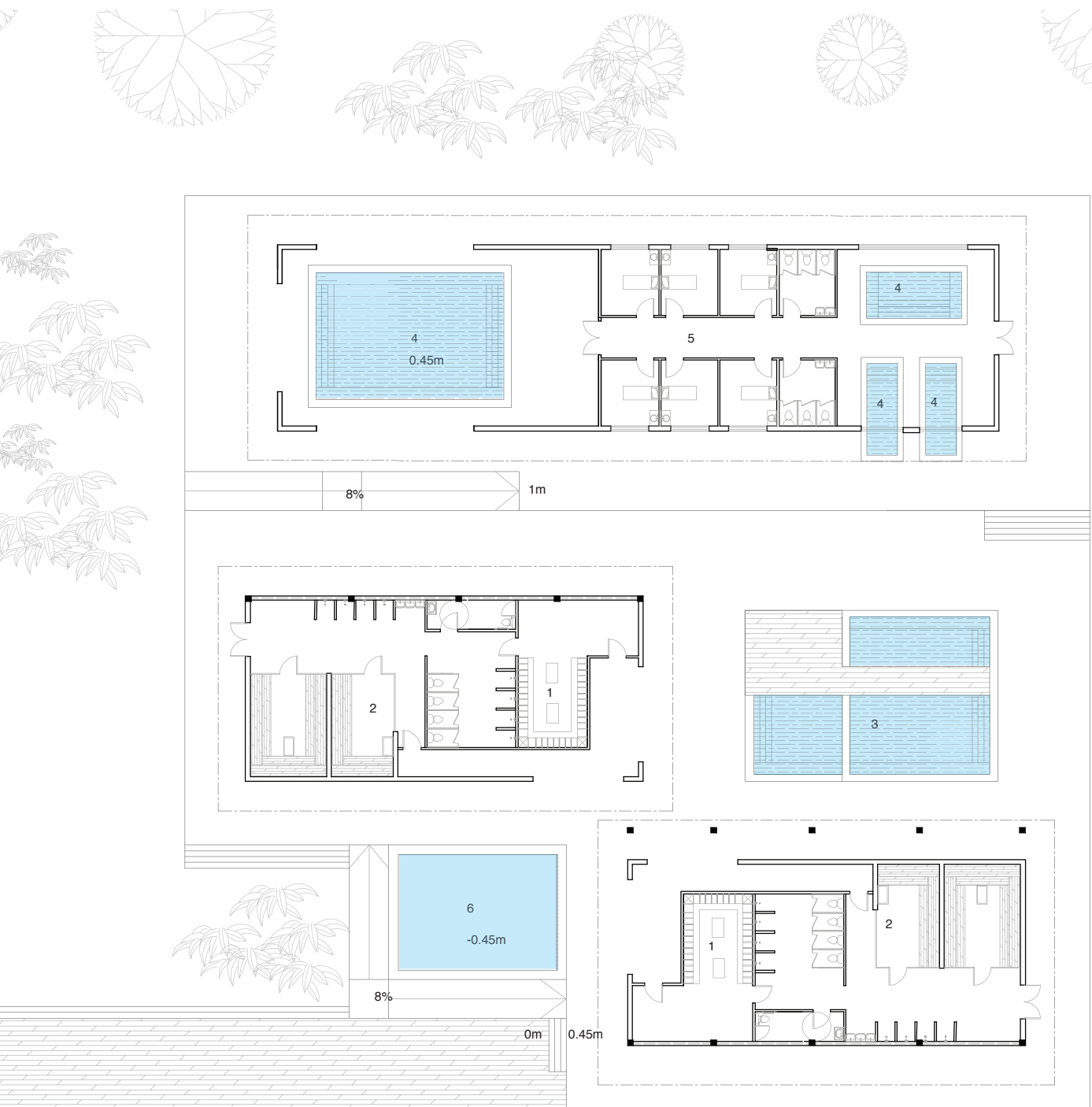
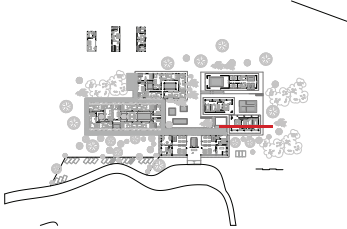
Hotel rooms | Interior



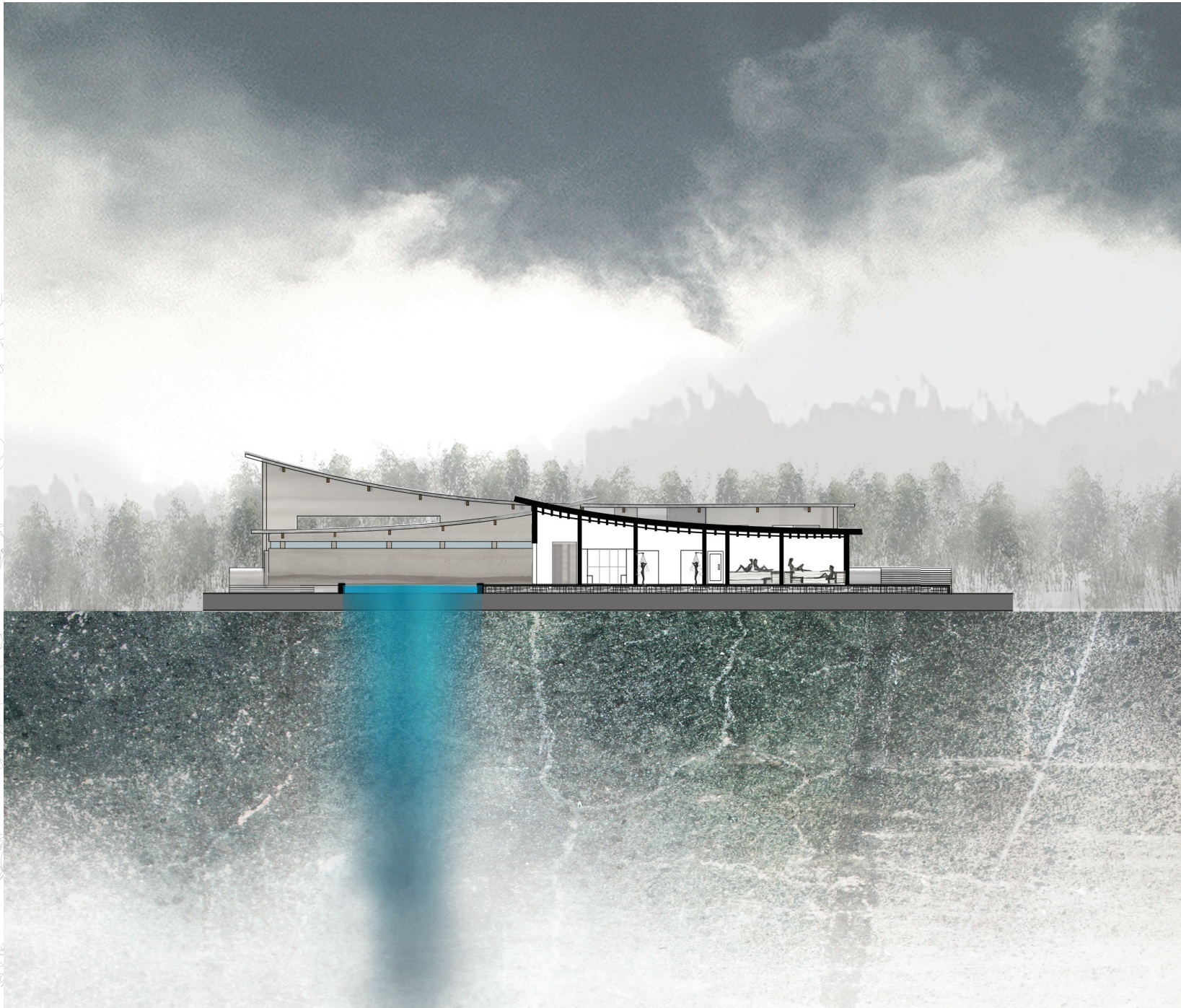
Design I Hot spring area



Hot spring area | Plan



- 1. Changing room
- 2. Sauna
- 3. Outdoor Hotspring pool
- 4. Indoor Hotspring pool
- 5. Spa room
- 6. Landscape pool



Hot spring area | Outdoor hotspring pool



Hot spring area | Indoor hotspring pool



I II III IV V

Conclusion

C

onclusion

In this day and age, China still plays a role as a construction site for global architects. When a new architecture is built, the old one is demolished. When a new city expands, a local village is eroded gradually by internationalization and modernization.

With the social progress and development of modern city, the benefits that modernization brings to people can not be denied. However, it is sad that the local identity lost because of over pursuit of internationalization and modernization.

Critical regionalism rethinks the relationship between a site and regional culture. While, based on modernization and internationalization, critical regionalism provides reflective thoughts. Criticism does not mean confrontation. Contrarily, criticism is an approach to finding the balance between globalism and regionalism. This is an aim which most critical regionalist architects and designers are working on.

However, it is hard to tell that if critical regionalism is the best future for modern architecture. The development of modern architecture towards multipolarity has become a trend. When architecture exists, it never stop embracing diversity. Just as ecological diversity exists in nature and cultural diversity exists in society, a healthy development of architecture needs to preserve and respect its diversity. Hence, it is favorable for the author to suggest that the architects and designers, should not consider one specific architectural design approach, in this case, the critical regionalism as an ultimate form of design. Rather, it can

be considered only as one optional design approach or a relatively new way of thinking. If, unfortunately, architects are obsessed with one specific approach, it would definitely jeopardize the diversity of design thinking and ultimately put the future of this industry at stake. Furthermore, the architecture of critical regionalism might not maximize the most value in anywhere in the world. Critical regionalism gets maximum value when exists in a cultural context with strong regional features.

Nevertheless, it is impossible to ask a architectural design method to solve every problem. Every architectural style has its own advantages and disadvantages. However, based on the situation that the cultural identity of China has been sacrificed for the rapid expansion of modernized city in a Pan-western manner, critical regionalism is a potential architectural design approach to save people from identity crisis.

Acknowledgement

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